WHOLESALER'S SALESMAN

CONTENTS — NOVEMBER; 1942

Times and Trends	O. Fred. Rost	9
Business Index—Sales and Inventories		19
Business Index—Regional Analysis		22
Pre-War Planning Pays Off in Success Today	Howard J. Emerson	32
Selling Through "Extra Services" That Aid the Contractor and Dealer	John Albert Austin	34
Help Customers Plan for Lighting Maintenance	E. W. Beggs	38
A Wholesaler's Salesman is Back of Every Housing Project	Henry W. Young	42
Electrical Wholesalers Under the Microscope	L. M. Nichols	44
Construction Builder of Bases	An Editorial by James H. McGraw, Jr.	55
Camera Clicks at Turner Electric Co., Detroit		57
Wholesaler's Salesman News		27 and 67
New Products to Sell		64

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Director of Circulation:
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From .....

.....

To .....

.....

Signed .....

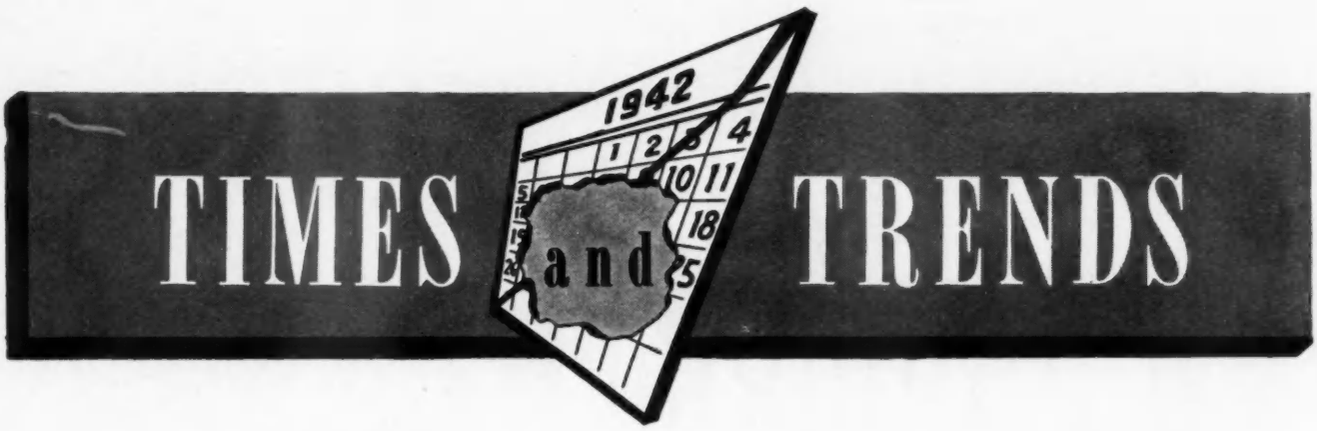
POLARIZED PLUGS and RECEPTACLES

H & H Products to help energize War-production plants

Give more power to MAN-power through more *Outlets* for portable tools. Add to flexibility of plant-equipment with additional power connections for light machines . . . Here's a way for your Contractor customers to extend production facilities, — to "energize" manufacturing operations *or* plant-conversion jobs.

H & H provides many popular types of Polarized Receptacles and Plugs, built for rough handling in war-driven manufacturing. Two, three and four-wire Receptacles, Plugs and Connectors in 10, 20, 30 and 50 Ampere capacity. Above-shown are a few representatives of our *complete line* for Industry's current needs.

HART & HEGEMAN DIVISION
THE ARROW-HART & HEGEMAN ELECTRIC CO. HARTFORD. CONN.



$5,000,000,000, That's the estimated value of goods which the electrical industry will produce during 1942, according to George C. Thomas, President of Thomas & Betts Co., and President of the National Electrical Manufacturers Association.

Mr. Thomas stated also that output of the industry as a whole has doubled since 1940, while total production of electric motors and turbo-generators trebled, and that of welding equipment quadrupled.

Considering the fact that 1942 sales of electrical wholesalers will run well above $1,000,000,000, it appears that WHOLESALERS SELL MORE THAN ONE FIFTH of all electrical products.

★

Number 1 Post-War Boom First field likely to show concrete results after the war in satisfying dammed-up consumer wants is the construction industry, according to Dan W. Kimball, president, Associated General Contractors of America. While many industries will need several months for re-tooling before they can show concrete results, the building field will be able to swing into action at once.

New materials and new techniques developed during the war will combine with simplification and standardization of materials used, simplification and mechanization of processes of assembly and volume production to reduce costs. The potential market is expected to be especially attractive in the $2,500 to $3,000 price class. Even a casual estimate of the quantities of electrical materials and appliances that will go into these homes promises that business will be there—and in quantity—for electrical wholesalers.

★

Inventories Squeeze Hot off the griddle, just as we go to press, comes a statement from WPB's Donald M. Nelson, forecasting early issuance of an order which will require the achievement of normal inventories by the early part of 1943. Under the plan, inventories must be maintained at the same ratio to sales as is shown by the average in comparable quarters of the years 1939-40-41.

Mr. Nelson said, "The first step of the original plan, calling for a study of quarterly inventories and sales reports cannot achieve the desired results. Therefore, WPB will proceed directly to the second step—A PROGRAM FOR FORMAL CONTROL AND ENFORCEMENT OF "NORMAL" INVENTORIES."

★

Contrast Some weeks ago *The Saturday Evening Post* carried the story of "The Company War Can't Lick."

In it was quoted a letter, written 127 years ago, in 1815, by the Deputy Commissioner of the United States Government, in which he sent a check for $446 "on account" of the debt owed that New England manufacturer. The Commissioner explains that he has received but $6000 to be distributed among $80,000 debts and says that he has "great hopes of money soon to pay all off."

Today the country is headed toward a $200 Billion national debt. A tax bill just recently enacted is expected to raise $9 Billion within a single year. Our war expenditures run into billions YET—The U. S. Government pays all bills when due.

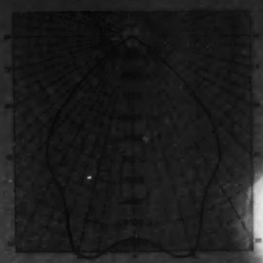
★

Victory Taxes Under the new tax law, just enacted, every employer, beginning January 1, 1943, will be obliged to withhold 5 percent of the wages paid to any employee who receives more than $624 per year.

Since the amount withheld automatically becomes the property of the government and must be remitted according to instructions, every business should set up a separate bank account into which the Victory Tax funds are placed for eventual transmittal to the U. S.

STEP UP PRODUCTION

No. 589-T Curtis Reflector Unit (with tripod holder). For 750, 1000 or 1500 watt P. S. lamp or 400 watt M. V. lamp.



Photometric curve of the No. 589 Curtis Reflector Unit using 1000 watt P. S. lamp.

No. 1589 Curtis Reflector Unit (with metal housing).

No. 589 Curtis Reflector Unit with socket and holder.

To knock the spots out of spotty production WAR INDUSTRIES NEED THESE REFLECTORS

Here's an immediate opportunity to STEP UP LIGHTING, to increase working capacity, make production levels uniform. . . .

STEP UP SPEED of layout, delivery, and installation by specifying "X-Ray" Silver Mirror Reflectors. They use a *minimum amount of critical materials* and have been the standard of lighting quality for over 40 years. They are easy to maintain, and not subject to deterioration.

STEP UP EASE OF SEEING with these remarkable new Curtis industrial units with their exceptionally high percentage of useful light.

The new Curtis industrial units shown here are right now "going great guns." More and more possibilities for their use are opening up around you every day. If you haven't full information about them—write for it now.

CURTIS LIGHTING, INC.

6135 W. 65TH STREET.....CHICAGO

Treasury. Any other plan of procedure, and particularly the retention of those amounts in the working funds of the business, would be dangerous.

★

S-O-S We reprint an advertisement that appeared October 26th in the "Wanted" section of a New York daily newspaper.

If any wholesaler has the urgently needed copper wire in stock, please wire the advertiser saying that you read about their needs in this publication.

"We are in the market for 75 pounds of #32 plain enameled copper wire, also 25 pounds of #23 plain enameled copper wire, with A-1-i priority. Davis Instrument Mfg. Co., Inc., 513 East 36th St., Baltimore, Md."

★

Cover The picture which appears on the cover of this issue was first spied by one of our editors in a booklet published by General Electric Co.

Its belching smoke stacks and spectacular lighting effects seemed to represent so perfect a portrayal of today's all-out production effort of American industry, that we asked for permission to use the picture on our cover. We thank General Electric Co. for having granted our request.

★

An Important Quote In a speech made in St. Louis recently, Walter D. Fuller, chairman of the board of the National Association of Manufacturers said "When we in America talk about victory today, we mean more than victory over Hitler and Hirohito and the evils they have fostered in the world. We mean complete and final military victory, but we also mean economic victory. We mean victory over the destructive force of poverty, victory over unemployment, victory over the champions of defeatism wherever they may rise."

★

Super Salvage A million pounds of scrap metal recovered each day is G. E.'s record of cooperation with the nation's salvage drive. Steel and iron make approximately 90 percent of the metals recovered. Of them, an average of 14 carloads is shipped to mills, foundries and smelters each day, about 20 percent is reused in the company's operations.

But whether waste metal piles up at the rate of a million pounds a day, or is periodically cleaned out of remote corners in the warehouse, or is just an accumulation of tin cans from yesterday's soup, *all* scrap is important, and every individual, wholesaler or large corporation must make constant and regular follow up to make sure that such scrap as he controls gets into use.

Coddle Your Car No, it won't be possible to step out and buy that long-longed-for new car right after the war. Should it become necessary for manufacturers to scrap their 1942 dies, as it may be, it would be at least nine months to a year after the war ends before they could begin turning out new cars. Even if present dies are put back into use, it will take three or four months before new cars go into production. It doesn't take much gazing into the crystal ball to make the advice "Coddle your car" words of wisdom that are of great significance to future events.

★

OPA vs. Fair Trade Under date of October 18, the Office of Price Administration warned manufacturers and wholesalers against suggesting retail prices in any manner, even under a State Fair Trade contract, without putting the retailer on clear notice that the suggested or Fair Trade prices may be charged ONLY if they do not exceed the retailer's ceiling price as determined under OPA regulations. 'Nuf said.—

★

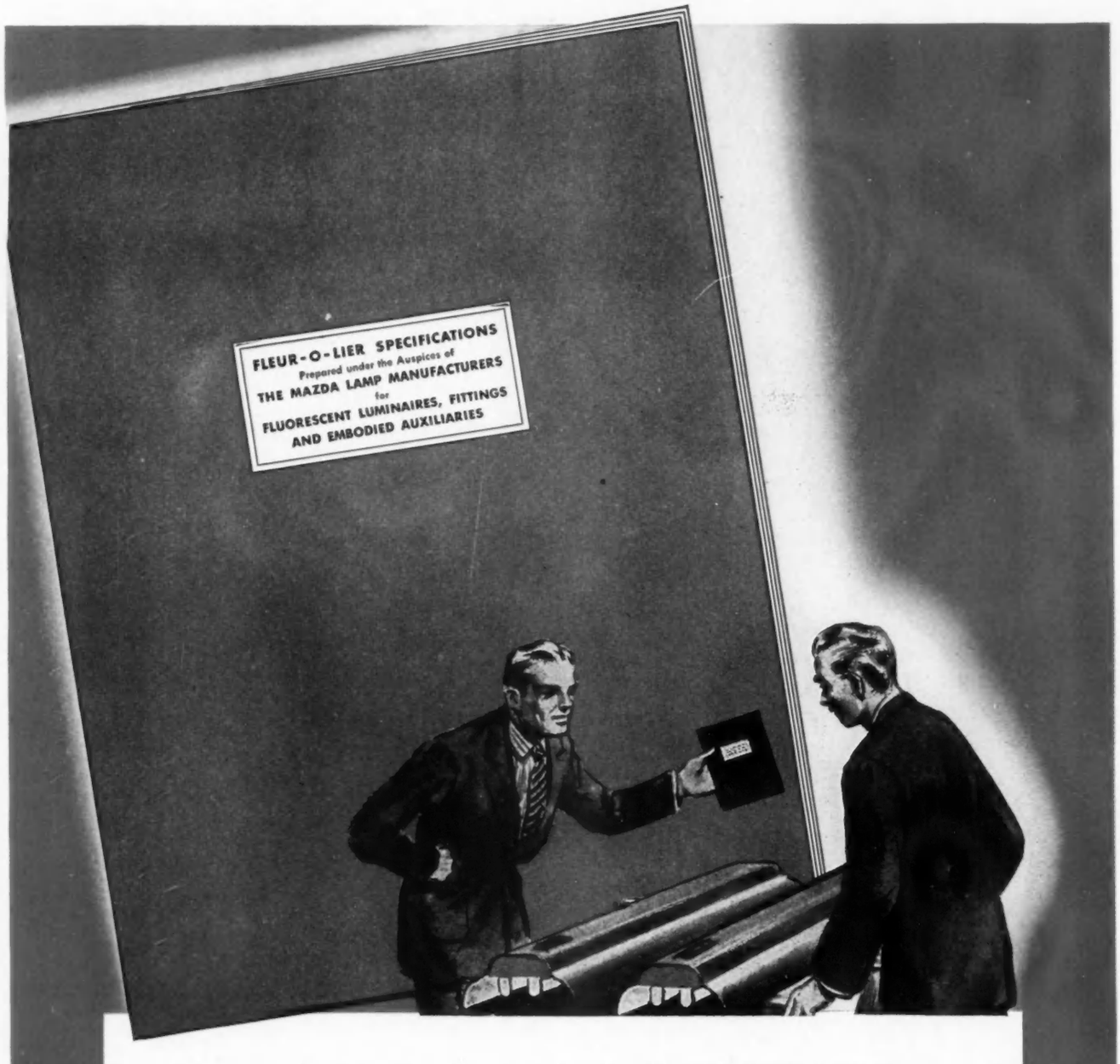
Credit for Cash Wartime loans are being insured on three counts under FHA's Title I program —for remodeling to house war workers, for repairs to maintain property, and for installations to conserve heat and fuel. Because these three types of work have an important place in the war effort, they are exempted from some of today's restrictions on materials and credit.

Loans for repairs and maintenance work such as is necessary to keep property in good working condition may run as high as $2,500, those under $1,500 are repayable within 12 months, those for essential emergency repairs repayable in three years. Loans for improvements that will reduce fuel consumption, such as conversion from oil to coal units, insulation, storm doors and windows and weather-stripping do not require WPB permission. They are available in amounts up to $5,000 for as long as 7 years. A remodeling loan, except for those under $200, calls for WPB authorization, will be granted only in areas which have been designated as having insufficient housing accommodations for war workers.

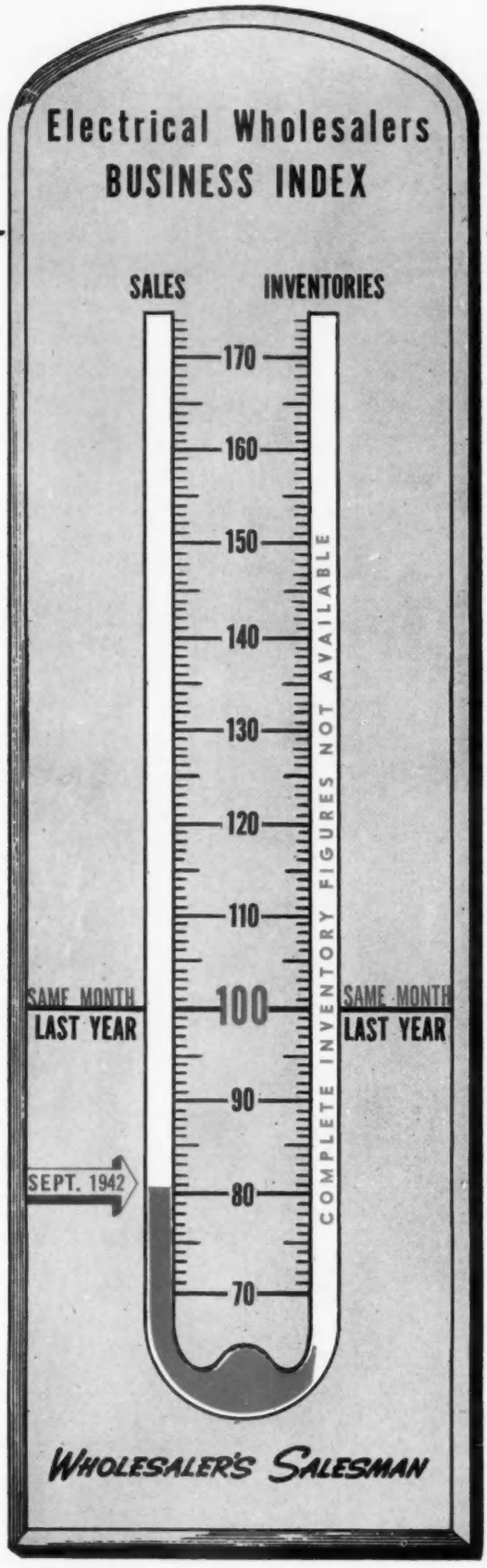
Obviously, every project financed will make business for local contractors and wholesalers.

EDITOR

To answer the Questions of men who



These manufacturing specifications for Certified FLEUR-O-LIER fixtures have been written to protect those who *specify* and those who use fluorescent lighting. Skilled lighting engineers of the MAZDA Lamp manufacturers put their full knowledge into the setting up of these standards—to assure you of highly satisfactory service from fixtures and efficient performance from lamps. *Get a copy* for your files!*



SOURCE These monthly reports covering the business activities of electrical wholesalers throughout the United States are collected and compiled by The Bureau of the Census of the U. S. Department of Commerce.

Business Index
For the Month of September, 1942

SALES The trend indicated here during the past few months—a leveling off of electrical wholesalers' sales volume at the relatively high point of early Spring—seems more evident in the index this month. Sales of electrical goods, as reported by 330 wholesalers throughout the country, was the same for September as for the previous month.

This is the climax in a gradually diminishing difference between the recorded sales volume of each month since April. It would give reason to believe that the electrical wholesaler, now firmly established as a key function in war industry, will for some time enjoy business at a level which will reflect the more or less steady maximum production of these industries.

The year to year totals of wholesalers' sales in dollars in times like these, must not be taken as true mirrors of trend but rather each year must be considered in relationship to the particular abnormal condition prevailing at that time. In recent months it has been wiser for the wholesaler to watch the month-to-month trend rather than the comparison with the same month of last year. Year-to-year comparison accentuate abnormal sales peaks experienced during 1941 when the construction requirements of the Preparedness Program brought unprecedented demands for electrical goods.

Thus, in spite of the stabilization of monthly 1942 sales at the substantially high level of this Spring, totals for September dropped 19 percent below those of September 1941, when sales increases as recorded in dollars, registered an all-time high, 190 percent of the September 1940 figure.

The year-to-year comparisons should regain their importance, when they can be made once more against performance that is not as freakish as was 1941.

INVENTORIES The number of reports available from wholesalers at the time of going to press was not sufficient to justify publishing an index figure on inventories.

COLLECTIONS Collection percentages for the nation averaged 70 percent, a decline of 1 point from the average of the previous month and 2 points below the figure for September 1941. Accounts receivable were 1 percent below the previous month and down 12 percent compared with the same month last year.

You're the man *fir*

You're in the headlines these days—in "Inch-Marked" ELECTRUNITE STEELTUBES advertisements like that illustrated below, appearing in Electrical Contracting Magazine.

In these advertisements we're telling your customers and prospects about your present-day problems—and, *what is more important,* about how you can be of greater service today than ever before

We are suggesting to electrical contractors and industrial electrical maintenance men that they see you *first*—that they cooperate with you in giving you *complete* details on every job and in telling you well in advance what they will need on their next job

"Inch-marked" ELECTRUNITE STEELTUBES

If anyone can

YOUR ELECTRUNITE DISTRIBUTOR CAN

Maybe we make it seem too easy. It isn't always a "snap" for him to solve electrical supplies problems these days—but he will do his best to find an answer, even though it may take hours of studying customers' needs, juggling stocks and utilizing his broad knowledge and experience in the electrical industry.

He's ready to sit down and help you plan a job any time. But don't wait until the last minute. Give him information in advance. Ratings and symbols are most important, and he'll be able to tell you what to do about them.

The story of your job—materials needed, when you'll need them, the end use, the purchaser's symbol, the allocation classification symbol and the priority rating or extension—all this is the stuff that enables him to give you the kind of service on which he has built his reputation. Too, if your ratings don't happen to be high enough, he's the fellow who can best advise you on alternate selections. It's the basis of his business to be well informed on these things.

Get acquainted with your ELECTRUNITE DISTRIBUTOR. Tell him well in advance about your important jobs and he'll "go to bat" for you. He maintains contact with manufacturers of all types of electrical supplies. He'll do everything possible to get the job going on time and to keep it on schedule. If anyone can lick your problem, he can. So always see him *FIRST.*

STEEL AND TUBES DIVISION
REPUBLIC STEEL CORPORATION
CLEVELAND • OHIO
Berger Manufacturing Division
Culvert Division • Niles Steel Products Division
Union Drawn Steel Division • Truscon Steel Company
Export Department Chrysler Building, New York, New York

"Inch-Marked" ELECTRUNITE STEELTUBES PROTECTS WIRING . . . SAVES STEEL

Because it is made of steel, ELECTRUNITE STEELTUBES provides the dependable protection that vital wiring needs today. And—because it is designed for use with compression-type fittings and does not require extra steel as a base for threading—this streamlined raceway SAVES STEEL. An installation of 100,000 feet of ½" size instead of ordinary threaded conduit will save enough steel for a 50-ton tank. On thirty jobs of this size enough steel could be saved to build a destroyer. The "inch-marking" on every length and the ELECTRUNITE Bender help save steel, too—by reducing chance for error and wasted material. And—with compression-type fittings added—construction can be stepped up to meet rush demands, with less "back-breaking" effort.

Republic
"INCH-MARKED
THE ELECTRICAL RACEWAY WI

ELECTRUNITE STEELTUBES

Protects Wiring With Steel Saves Steel for Armament

"Inch-marked" ELECTRUNITE STEELTUBES provides the positive, lasting protection for vital electrical wiring that only open-hearth steel can give. Yet, this streamlined raceway saves steel which can be used to make fighting tools for our armed forces. It is designed for use with compression-type fittings —hence, it does not require EXTRA steel as a base for thread cutting.

PRINT

re talking about!

sold only through electrical distributors. Therefore it is to our mutual advantage to build distributor good-will among users of electrical supplies—to establish and strengthen closer relationship between stributors and their customers.

ould you like to carry on this job by sending reints of the advertisement shown below and others in the series to your customers and prospects? If so, write and tell us how many you need. We'll gladly send them.

•

STEEL AND TUBES DIVISION
REPUBLIC STEEL CORPORATION
CLEVELAND • OHIO

Berger Manufacturing Division • Niles Steel Products Division
Union Drawn Steel Division • Culvert Division • Truscon Steel Company
Export Department: Chrysler Building, New York, New York

INT IN BINDING

WHOLESALER'S SALESMAN BUSINESS INDEX

REGIONAL ANALYSIS

SEPTEMBER, 1942

ALTHOUGH the September sales of electrical goods, as average for the nation, showed no change compared with August, the sales by regions continued to indicate considerable month to month variation. Lows in five regions levelled off the four highs for the national figure of 100 percent.

The New England states took the lead with a 12 percent gain over the previous month, following three months in which this region lagged behind the nation by a few points. The Pacific Region (9) returned to its usual place above the national figure after being behind in August. For the fourth consecutive month, region 7 (West South Central) stayed substantially above the national average, giving more indication of the increasing industrial importance of that area. The Middle Atlantic states continued to bounce, one month higher, one month lower, than the national figure, as it has done almost without exception since the first of the year.

When compared with the same month of last year, sales by regions showed the results of the changing market conditions that have occurred since the Defense Program became an all-out war production effort.

The Middle Atlantic states had gone through the war preparation stage before September 1941 so that the sales figure for that month would tend to reflect a fairly stable business condition in that area. When sales for the same month of this year in that region are compared with last year., it seems natural that the percentage would be about 100. Also, it is equally logical when the West North Central, the East South Central and West South Central states show up this month with regional sales figures 45, 32 and 22 percent, respectively, below the same month of last year. Those states, which are basically agricultural, went through a construction boom in the Summer and Fall of 1941 when military cantonments and some war factories were built there. This year, with less boom business available, even a condition of substantial business volume would produce a severe decline when compared with that month of last year.

Figures in this table apply to the geographic divisions as outlined and numbered in red ink on map above

SALES Sept. 1942 Compared in % with		Trading Region (See Map)	INVENTORIES Sept. 1942 Compared in % with	
August 1942	Sept. 1941		August 1942	Sept. 1941
112	90	1		
97	100	2		
102	72	3	COMPLETE INVENTORY FIGURES NOT AVAILABLE	
96	55	4		
96	69	5		
90	68	6		
104	78	7		
92	75	8		
106	99	9		
100	**81**	For **U. S. A.**	..	..

WHOLESALER'S SALESMAN NEWS

Service Organizations' Needs Told to Senate Committee

Assistance needed to keep radio and appliance service agencies maintaining nation's electric equipment, Small Business Committee told. Suggests removing frozen items from L-63

THE necessity of helping radio and electric appliance dealers and other service organizations on problems of price ceilings, labor supply and inventories, was presented last month to the Senate Small Business Committee by the Electric Institute of Washington.

Managing-director J. S. Bartlett outlined a four-point program designed to assist these service agencies in keeping the nation's electric appliances in working condition for the duration. If some relief is not forthcoming, Mr. Bartlett warned, an estimated 50 percent of the firms now in business will close their doors before the end of 1943.

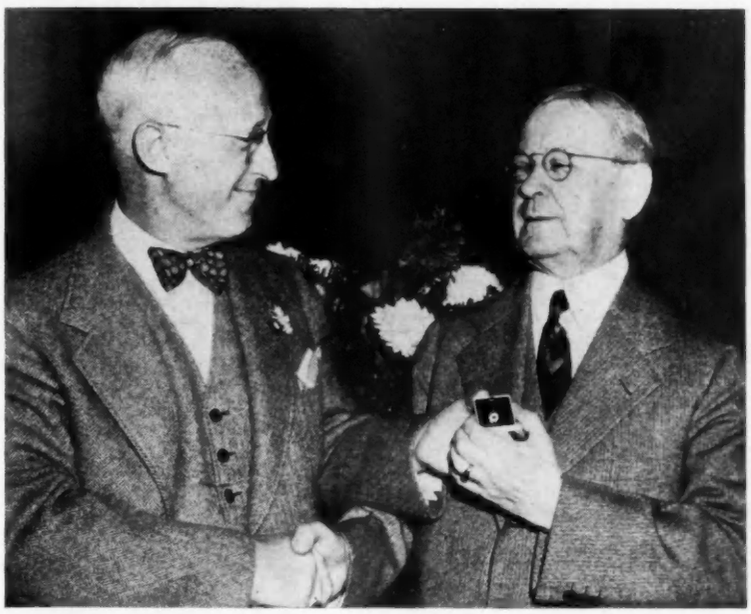
Regarding inventories, the Institute's report recommended modification of the present limitations on dealers and wholesalers' stocks to exclude that merchandise frozen as a result of government regulation or under strict regulation, so that stocks in other lines could be replenished to provide a satisfactory working inventory for an enlarged scale of repair operations.

"Former sources of profits to the servicing and repair business have been eliminated because no more electric appliances are available for sale, and a major part of other electrical apparatus and equipment has been put under strict priority regulations," the presentation to the Senate Committee pointed out. "During former days much of the repair and maintenance work was carried as a service incidental to the sale of new devices. Owners of appliances have been accustomed to paying repair charges more nearly in proportion to the cost of new equipment than based on the actual cost of the work to the repair agency."

Because price ceilings on services prohibit putting repair charges on a realistic basis, the institute suggested to the Senate that "a subsidy would appear to be the only alternative to relief under existing price ceilings, if this important servicing and repair work is to continue."

The shortage of labor could be remedied, the institute believes, through making available Federal aid for the training of repairmen. It also suggested that facilities be provided for training injured men who are being returned from active service in the

(Continued on next page)



***FORTY YEARS OF SERVICE** by Walter M. Dick, right, treasurer of the Westinghouse Electric Supply Co., is honored with a service emblem being presented here by Walter Williamson, executive vice president of WESCO. Mr. Dick joined the parent Westinghouse company in 1901 and was appointed auditor of the Supply Company when it was incorporated in 1922. Fifteen year service pins were awarded to A. W. Sullivan, manager of advertising and sales promotion, and to Arnold Korman.*

armed forces.

The problem of lease obligations was touched upon with a recommendation for legislation which would authorize adjustment of lease obligations where justified, extension of rent control to commercial occupancies and establishment of an orderly procedure for liquidating those concerns which must go out of business.

Phila. Wholesaler Aids Civilian Recruiting

Raymond Rosen, head of Raymond Rosen & Company, Philadelphia distributors of RCA-Victor products, has been appointed civilian recruiting aide for the Army Signal Corps in Pennsylvania, Delaware, and Southern New Jersey.

Mr. Rosen heads a drive to secure qualified servicemen and technicians from the communications industries for the Army Signal Corps. Experienced radio and sound men of draft status will be advised to enlist in the Army Signal Corps. Rapid promotion is being assured these men, and will be based on their proved qualifications following enlistment.

Mr. Rosen has appointed Harry Bortnick, promotion manager of Raymond Rosen & Company, as assistant in this drive.

Men who reside in the above mentioned states are advised by Mr. Rosen to get in touch with Lt. S. D. Distelhorst, room 623, Customs House, 2nd and Chestnut Sts., Philadelphia.

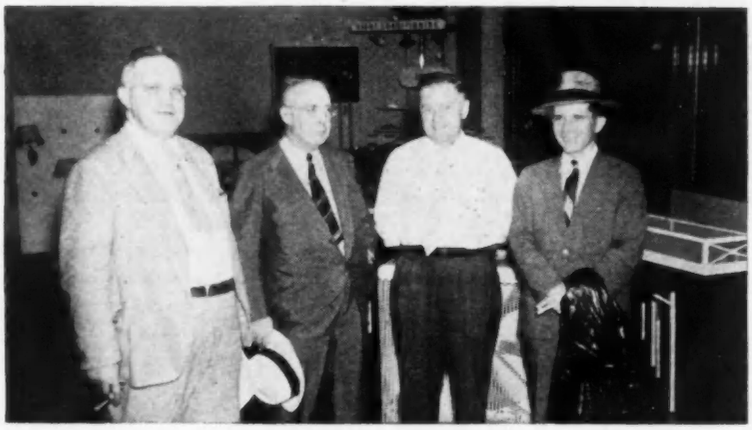
WPB's Krug Scheduled For NEMA Meeting

J. A. Krug, deputy director general for priorities control, War Production Board, was scheduled to be the principal speaker at the Annual Meeting Luncheon of the National Electrical Manufacturers Association at the Waldorf-Astoria Hotel, New York, October 28th.

Another feature on the program was the presentation of Fifty Year Certificates to five pioneers who have been associated with the electrical industry for the past half century. Those are: Charles R. Durling, president, Monitor Controller Co., Baltimore, Md., F. A. Merrick, vice-chairman, Westinghouse Electric and Manufacturing Co., Pittsburg, Pa., Henry D. Reed, consultant, Anaconda Wire and Cable

(*Continued on page 67*)

Among St. Louis Wholesalers

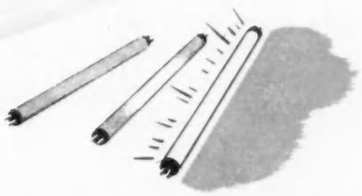


The WS cameraman catches an impressive foursome at General Electric Supply Company, St. Louis. Left to right are: E. Hein, outside sales; G. L. Ralston, district supplies sales manager; M. L. Starck, warehouse superintendent; E. J. Planert, lighting specialist in that territory.

A group of salesmen from Glasco Electric Co., St. Louis, line up for the WS cameraman. Included here are Fred Held, Al Bauer, Harry Fleischmann, Bill Auld, Al Kadner, George Towne, J. R. Steele, Frank Signaigo, Jim Kehnke, Louis Indermark, Earl Boub, Clarence Hancock, and Wes Hartnagel.

On the steps in the interior of United Electric Supply's new building are, left to right, bottom row: C. E. Vail, president; Paul Harder; Elmer Gassner; V. L. Leick. In the middle row are E. Bowen and Nellie Conway, and in the rear, Carroll Vail, John Hanrahan and Bob Craft.

Westinghouse
MAZDA LAMPS



BRILLIANT PHOSPHORS
from end to end

Today's Westinghouse Mazda Fluorescent Lamps produce more light than ever before. This increased brightness is largely due to a new series of lamp manufacturing steps which build up the glow of fluorescent powders to a richer and more sparkling brilliance. It is *this* series of techniques that give Westinghouse Fluorescent Lamps a gleaming brightness from end to end.

STAY BRIGHT
from end to end

Out of countless hours of laboratory research, causes of early lamp discoloration have been determined and corrected. In Westinghouse Mazda Fluorescent Lamps, a more accurately controlled gas pressure, a more precise measurement of mercury, and a new method of treating cathodes —keep these lamps brighter from end to end.

SMOOTHLY COATED
from end to end

A better and more abundant light also results when the phosphor powder coating inside fluorescent lamps is applied smoothly and to just the right thickness. With microscopic accuracy, a specially-designed machine "paints" a powder film in Westinghouse Mazda Lamps that's *precisely* the right density and texture for maximum illumination.

This Wholesaler's Pre-War Planning P

Starting two years ago to prepare its electrical wholesaling establishment for all-out wholesaling service during all-out war has brought outstanding success to Graham-Reynolds Electric Company of Los Angeles, and to D. A. Smith, sparkplug of the "preparedness program"

SHOULD you ask any prominent contractor or manufacturer in Southern California for the names of a few electrical wholesalers who are doing outstanding jobs of service for war industry, the chances are that the name of Graham-Reynolds Electric Company will be among the first few mentioned.

Even when competitors are questioned about wholesaler activities or recent large jobs, most of them say "You should also see Smith at Graham-Reynolds. He'll know all about it."

So this writer did see Mr. Smith and soon found out just why Graham-Reynolds has such a reputation in a territory where electrical wholesalers are continuously pressed to meet no end of unusual demands of that Southern California all-out war production area.

D. A. Smith, secretary and purchasing agent of Graham-Reynolds Electric Co., Los Angeles, wouldn't say that "we planned it that way," but a review of his company's performance record during the last few years shows that intelligent foresight and preparation for the current situation is the key to its unusual success today.

Before going into the background of Graham-Reynolds' "preparedness program", Smith showed some results of his work. Among some orders on his desk were a few which bore this stamped inscription: THIS AWARD IS BEING MADE TO YOU BASED UPON YOUR PROMISE OF SPECIFIED DELIVERY, AS YOU WERE NOT THE LOW BIDDER.

It took a lot of work and much planning to put Graham-Reynolds in an inventory situation that warrants many of those orders from the Army and Navy, Smith said. "And we had to start quite a while ago. I remember being in Hot Springs for the 1940 Spring NEWA Convention when Germany invaded Belgium. I began then to think seriously of what would be the situation for electrical wholesalers if and when this country entered the war.

"I figured that conditions would be somewhat the same as they were during the last war, except that they would be more intensified. I believed that the best way to prepare ourselves would be to establish our company and the related elements of our industry so that we could perform a proper and valuable distribution function in wartime.

"So, as soon as I returned to the West Coast I started to prepare us for any eventuality, making the first move within our own organization."

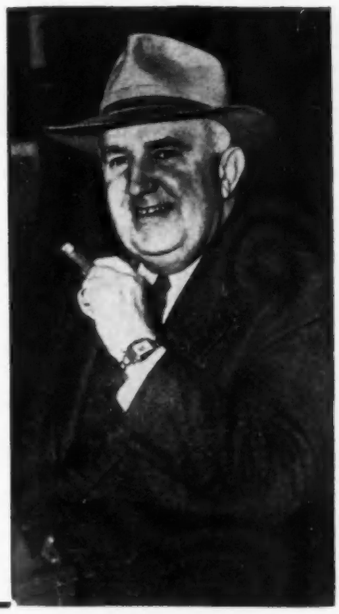
Mr. Smith told how his employees were first made conscious of the current situation and of the prospects for the future. Then they were instructed in the operation of priority systems. They were given the basis for understanding the necessity for government control during an emergency and how important it would be to have all detail on priorities and other forms handled promptly and completely.

"When we felt that our organization was ready to function we studied our customer lists," Smith continued. "We knew that it would be vital to have as much industrial business as possible. Our sales efforts from then on were directed primarily toward the development of industrial accounts, particularly among the oil, steel, aircraft and shipbuilding companies that are

N. W. Graham, president of Graham-Reynolds Electric Co., Los Angeles.

ng Pays Off In Success Today

By Howard J. Emerson



D. A. Smith

abundant in our territory. By preparing to serve these vital industries we would best be serving our country as well as insuring our company's existence for the duration."

Of course, such a program was not completed overnight. But, as more of it was started, passing events in Europe gave support to Smith's feeling that this would be a global war. And here in the United States, defense manufacturing was stepped up. A lend-lease program was instituted to provide war materials for the fighting democracies. Shortages of materials were increasing and priorities became more than a passive threat to many manufacturers of consumer goods.

Realizing that "the electrical industry must work as a whole to live," Smith made plans to carry the program to dealers and contractors. The initial field work was handled by salesmen on their regular calls. Bulletins were issued regularly to further the plan of educating the field on the probable shape of things to come. And in those cases in which immediate results were not evident, executives of Graham-Reynolds made calls with the salesmen as a double-barreled attention-getter.

In the field, these wholesaler's salesmen and executives first tried to implant the basic philosophy around which all action would be based. When they felt that their subjects understood what lay ahead for everyone in the industry and showed a willingness to cooperate for the common good, more concrete ideas were presented.

The importance of getting priority-favored business was emphasized and re-emphasized. So was the necessity of getting ratings for each order so that inventories could be replenished. Interpretation of government orders was discussed, and instruction was given in the handling of government forms.

At the same time Smith was getting his inventory into proper balance for the anticipated demands of war manufacturing. "More than 1½ years ago we started to build up our inventory to meet the demands we expected from warplants," Smith said. "As soon as any of this material was sold we re-ordered immediately. Assisting us in building up such a good inventory was the effect of our new industrial business and the fact that we started so early to force ratings from our customers."

When war was finally brought to this country, the Graham-Reynolds Electric Company was able to move quickly and effectively in stride with the sudden expansion of war production. It had procured industrial customers who were specializing in war work. The gradual decline in consumer business permitted the conversion of manpower and facilities to the handling of war orders. No time was lost in training the field and office staff in priorities procedure for this had been accomplished long before the "push" began. This early training had also conditioned the attitude of employees toward the inevitable rush work and extra detail that accompanies demands of war industry.

Working with Graham-Reynolds as it swung into this war business were the contractors who had profited by Smith's "preparedness program" and the dealers who had listened to Graham-Reynolds missionary salesmen months before.

The respect that this company enjoys in its territory today is the best indication of the all-around success of the long-range plan that Smith started thinking about in May, 1940.

And as to the respect this area has for Mr. Smith—well, maybe that was expressed best by a Los Angeles contractor who has the reputation for being so wrapped-up in his own success and importance that he hardly knows the meaning of the word "compliment." Yet, during a terrific denunciation of wholesalers he did soften for a moment and say ". . . except for that fellow Smith over at Graham-Reynolds. He's got something on the ball."

By John Albert Austin

Selling Through Extra Services That Aid the Contractor, Dealer

Wartime selling technique of electrical wholesalers includes many new "extra services" that help the contractors and dealers with operational problems, and help build a strong, unified industry for the post-war era

IT would be a shallow business victory for electrical wholesalers if the majority of them stayed alive and even prospered for the duration, while the long-range, peacetime outlets for electrical goods —the contractor and dealer—perished through neglect.

Fortunately, wholesalers know that they cannot afford to divert attention from the contractors and dealers, and most of them are not. They realize that the existence and well-being of these fellow members of the industry are vital to peacetime electrical prosperity.

The alert wholesaler knows also that today his contractor's consumer business has slowed up materially and that for many of his dealers a stock of appliances is rapidly becoming just a fond memory. But, what to do about it? The wholesaler can't sell material to the contractor for consumer use except within strict WPB limitations and he can't pull appliances out of thin air for his dealers. But wholesalers can, as many of them are through "extra services," help the contractor and dealer to alleviate these war-born problems.

The plight of the contractor, particularly in regions that have ample war business, is not as serious as that of the dealer, but his problems are many nevertheless. He needs help in order to make this war business practical and profitable. And this is help that an electrical wholesaler is in a natural position to offer, just as one particular wholesaler in New York has been doing.

Priorities Advice

Since the first priorities regulations came through from Washington, this wholesaler found his contractor-customers in a serious state of confusion. Endless problems confronted them, and they couldn't be expected to take time to become experts on interpreting the complex priority system. So it seemed logical to this New York wholesaler that he should provide authoritative service for all of his contractors.

He added a man to his staff and provided him with complete information facilities on first the OPM and then the WPB regulations. From then on contractor-customers had this expert available to advise them on what ratings to seek, what products were most advantageous to use where a choice was possible, also to help him fill out the required forms. This innovation was the aspirin for many a contractor's worst headache. The contractor profited with better service to his customers, by using less time preparing for jobs, by getting jobs that maybe couldn't be handled without knowing just where and how the materials could be obtained under the priority set-up. But, primarily it helped the contractor to give speedier service to war industries and to war prospects, which automatically improved his chances to stay in business.

Other examples of wholesalers extra services to contractors indicate the same objective, namely, to help the contractor perform an essential service during the war so as to enable him to stay in business.

For Long-Pull Planning

A wholesaler on the West Coast started in long before Pearl Harbor with a long-ranged plan of intra-

(Above) The wholesaler's salesman who sells through "extra services" must be ready to spend much time with customers, checking plans and specifications and recommending the products and materials that can be obtained most easily.

(Left) The showroom of Listenwalter and Gough, Inc., Los Angeles Electrical supply house, indicates the trend toward supplying dealers with non-critical products that will help relieve the shortage of appliances.

industry cooperation. His salesmen took time on each call to go over with contractors the problems that a war economy would bring. Then, as these problems developed, both the salesmen and the sales executives made special calls on which occasion the individual problems of each contractor were discussed in relation to present and future business conditions.

Contractors were shown the importance of building up industrial contacts which could be expected to produce business when war-time conditions might force private work temporarily out of the picture. The wholesaler's representatives went over the inventory problems with these contractors, pointing out the necessity of getting ratings for each job so that the wholesaler could replenish his stock and be able to fill the contractor's next order. This wholesaler also provided an expert to work with contractors in filling out priority forms.

The Expediter Helps

The executives of a large California house found, along with other West Coast wholesalers, that getting materials delivered to the right place at the right time was a big problem facing them even after they had completed all the details of ordering, obtaining preference ratings, etc., and had received the manufacturer's promise of delivery. So, to see that material, once ordered, left the factory on time and then made the 2000 to 3000 mile journey without getting sidetracked, this wholesaler assigned one man to work on this problem, as expediter of delivery.

Without that extra service, the wholesaler's contractor or industrial customers would be the victims of the many delays and errors that can arise so easily when both the manufacturers and the country's transportation system are subjected to wartime pressure. Contractors and industrials profit well by this service, and there's no question as to the benefit to the wholesaler when his customers are helped in maintaining and operating their businesses.

Consultations on Materials

Consulting work on the availability of materials is another extra service being provided by many wholesalers today. By using his knowledge of the scarcity of materials, and the length of time demanded for shipments by the different manufacturers, the wholesaler can go over an order with a contractor and make many valuable time-saving suggestions on product and brand changes. This extra service aids not only the particular contractor and his customer, but helps the entire war effort through the many savings made in critical materials.

An electrical wholesaler in the textile section of New Jersey reports considerable success for such a consulting service which he has instituted. Most of his contractor-customers have war orders, but the priority rating is lower than that which would be extended by a more vital industry. It is very important then that all orders for this industry specify the materials most easily obtained. Particularly in ordering wire, the wholesaler has found this service very valuable. The contractors still use the old method of wire coding, although that often means that wire heavier than necessary will be specified. The wholesaler goes over all wire orders with the contractors and suggests changes in specifications to save copper and rubber wherever possible. As a rule the contractor will be able to get such changes okayed and then will order the smaller wire. Thus, the contractor gets his wire sooner, the

War Aid Service Given By G-E WIRING MATERIALS DISTRIBUTORS Is Emphasized In G-E Advertisements

All over the country
G-E Wiring Materials Distributors
Offer Wiring Supplies for War Projects
G-E WIRING MATERIAL INFORMATION
GENERAL ELECTRIC

One of Many Ads Describing Good Service Given by G-E Wiring Materials Distributors

EVERY G-E Wiring Materials Distributor in the country is represented at one time or another in the G-E ads emphasizing the war aid service given by G-E Distributors. These ads appear month after month in regional and national magazines. They are read by electrical contractors and engineers, architects, industrial men and utility men.

Pictures of service being given to customers by different G-E Distributors to aid the war effort are shown in each ad. New pictures appear in every ad every month. The ads started several months ago and will continue until pictures of all G-E Wiring Materials Distributors have been shown. Information on the various services given by G-E Wiring Materials Distributors is given in the ads.

This is one of the ways General Electric is co-operating with its wiring materials distributors. G-E Wiring Materials Distributors, of course, handle a full line of conduits, wires and cables and wiring devices made by one manufacturer. The variety of materials is large and their quality is uniformly high. These facts help G-E Wiring Materials Distributors to give the helpful war aid service consistently shown in the ads.

GENERAL ELECTRIC COMPANY, APPLIANCE AND MERCHANDISE DEPARTMENT, BRIDGEPORT, CONN.

GENERAL ELECTRIC

customer's job is completed more quickly, the war effort saves valuable materials—even the wholesaler profits by being able to replenish his stock with less delay.

Helping the Dealer

It is not only the electrical contractor who is getting the benefit of these extra services from the wholesaler. The appliance dealer is another who deserves and gets special attention.

There's no secret about the immediate and serious plight of these dealers. They are set-up in business to merchandise products which are fast becoming non-obtainable. Yet they were and in peacetime will again be essential factors in the distribution of electrical appliances. Any effort made by the wholesaler to aid the dealers in weathering this strenuous business period must be considered more than a gesture to any of them as individuals, for it is a constructive contribution toward preserving an important element in the electrical industry.

Typical of such activities is that reported by one of the largest wholesalers in the country. He has arranged informal monthly meetings with more than 200 dealers so that these men may consult with the wholesaler on problems of shortages, business management, displays, packaging, etc. From years of experience and through contact with so many dealers, this wholesaler is help on his problems of overhead, sales costs, turnover and salesmen.

To help fill the gap caused by the shortage of electrical appliances, this wholesaler has taken on new products which can be sold through those of his dealers who are determined to stay in business. Among these new products are iceboxes, which the wholesaler is recommending as temporary substitutes for those who can not get electrical refrigerators.

Another new product is home insulation, which through his contacts with home owners, the dealer is quite well equipped to merchandise profitably. There is also an "opportunist" touch to the handling of insulation at this time as this wholesaler is located within the region of the country where the rationing of fuel oil has brought added interest to the value of insulating private homes.

As with the insulation and iceboxes, many products which wholesalers are now handling are keyed to a situation which causes an immediate demand larger than normal. One wholesaler in New York has added oil-to-coal converters to allow his dealers to take advantage of the demand created by the shortage of fuel oil. A moderate success has been reported for the sale of these converters, but both dealer and wholesaler realize both the seasonal aspect and the unusual situation which makes the sale of this product only a temporary expedient.

Most of the other new products can be classified under the "non-essential materials" heading. Many wholesalers have taken on anti-freeze for the Fall months. Their dealers have had some success with the sale of this product although they are up against stiff competition from the two leading brands which are sold only through previously established outlets.

In an attempt to fill out the emptying shelves of their dealers, many wholesalers have added new lines of such non-seasonal goods as are still available. For instance, one Eastern wholesaler reports having added the aforementioned seasonal items, the oil-to-coal converters and the anti-freeze, and also hand cleaners and soaps with the special dispensers used for them; floor mops and liquid wax, crystal glassware and glass novelties.

Regardless of any success through the sale of non-electric lines, neither wholesalers nor dealers are deceived into thinking that the handling of "strange" products can fill the gap caused by the stoppage of appliances. Nevertheless the plan represents an immediate effort by the wholesaler to alleviate some of the problems confronting his dealers.

Many wholesalers are helping dealers build up their appliance repair and maintenance business. Included in such help is usually some method of training new repairmen to relieve the shortage. Above, one of the many meetings at which Westinghouse Electric Supply Co. gave organized instruction to its dealers.

Help Your Customers to Plan For Lighting Maintenance

Before-the-sale planning for fluorescent light maintenance and replacement gives the wholesaler opportunity for SERVICE THAT BUILDS SALES—helps assure long-range customer satisfaction

ALTHOUGH fluorescent lamps have an extremely long average life, they nevertheless wear out and eventually burn out or fail in service. When this time comes, the old lamp must be replaced by a new one. Since replacements become necessary in every installation, it is desirable that as far as possible fixtures should be so designed and made that lamps can be easily replaced and the location of the fixtures should be chosen to provide for ready access to them for maintenance.

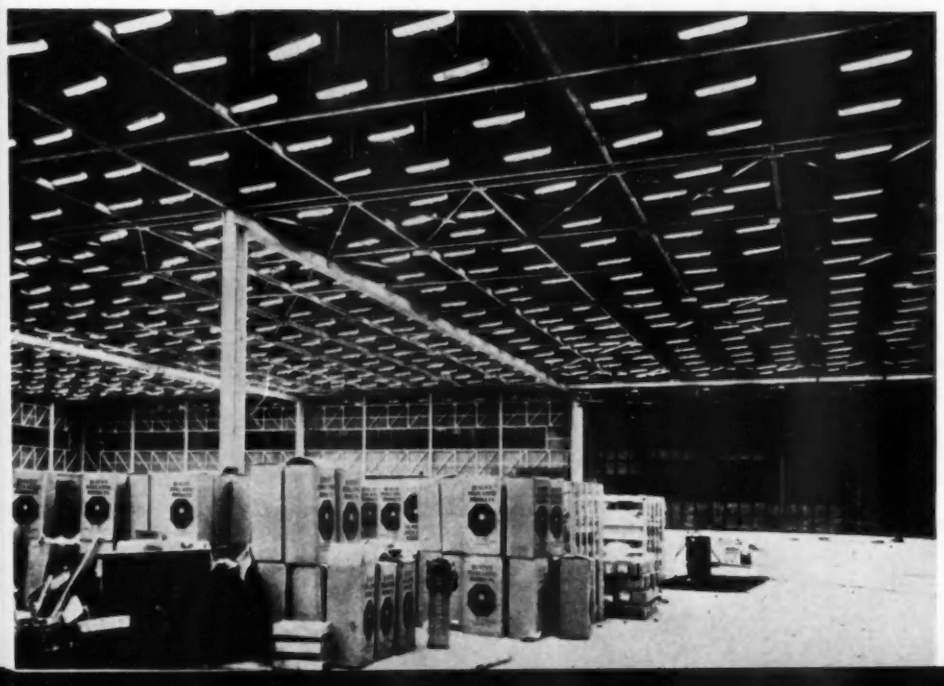
It is impossible to predict when each individual lamp will burn out, but it is quite possible to predict the number of lamps that will fail in any given group of lamps used over a definite period of time, if the conditions are known and particularly if the group is quite large. Lamp life expectancy curves which are similar to actuarial data for humans may be used, and with them a maintenance program can be developed that will provide the maximum satisfaction at the minimum cost.

In developing such a program the lamp life expectancy should be divided into two parts. The first part is an analysis of the group of lamps installed when the fixtures were first put into operation, and the second part is an analysis of subsequent lampings.

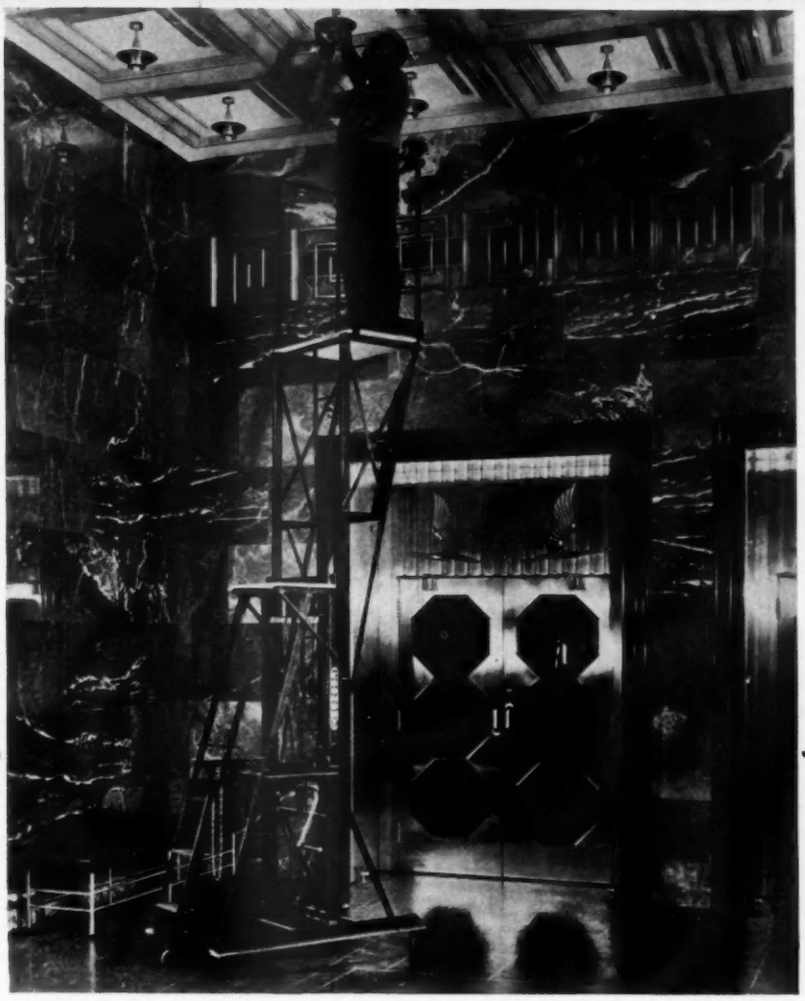
Since the initial lamps are all new, few, if any, fail during the first few hundred hours of service. As the group of lamps ages, however, an increasing number will burn out with the rate of mortality greatest at or near the average life point. A few will remain in service for a considerable period of time. With the average run of fluorescent lamps, however, there is a fairly wide spread in life, and about half of the first lamping will fail in a period equal to about one-third the average life of the lamps.

The mortality curve follows the life cycle of the first or initial lamping only. From it the following conclusion may be drawn:

1. About half of the lamps will have burned out when the average life point is reached.
2. A few lamps will burn out quite early.
3. A few lamps will live far beyond the normal life expectancy of the group. (Note: The average of the group cannot be determined until these lamps have burned out.)
4. Most of the lamps will burn out near the average life point.
5. The rate of failure varies



Where it is not convenient to use a telescoping platform, individual lowering hangers provide ready access to lighting fixtures. Each fixture can be lowered to the floor for servicing.



By E. W. Beggs*

Telescoping platform aids the maintenance man toward faster and more efficient servicing of high mounted lighting fixtures. This type of lift can be extended to a 15 foot platform level, can be used for mounting heights up to 20 feet.

widely, rising gradually to a peak at the average life point and then diminishing as new lamps are installed.

The approximate number of lamps per month or per year that will need to be replaced after the replacement curve levels out can be estimated from the formula below.

$$\text{Number of failures} = \frac{\text{Hours Burned} \times \text{No. of Outlets}}{\text{Rated Lamp Life}}$$

This is the formula that should ordinarily be used although deviation from this average replacement rate must be taken into account during the first few lampings.

The principal maintenance requirements for economical and dependable lighting are:

1. Provide means for access to the fixture for cleaning and relamping.
2. Provide in advance for the replacement of lamps that are to burn out. In this, it is generally best to consider first the replacement of the initial group of lamps and then to plan for the ultimate, less erratic, replacement rate of later groups of lamps.
3. Consider the relamping and maintenance requirements of the installation when choosing the size and type of lamp to use.
4. Where a fixture or group of fixtures is extremely difficult to service, use the group replacement plan.

Means of Access

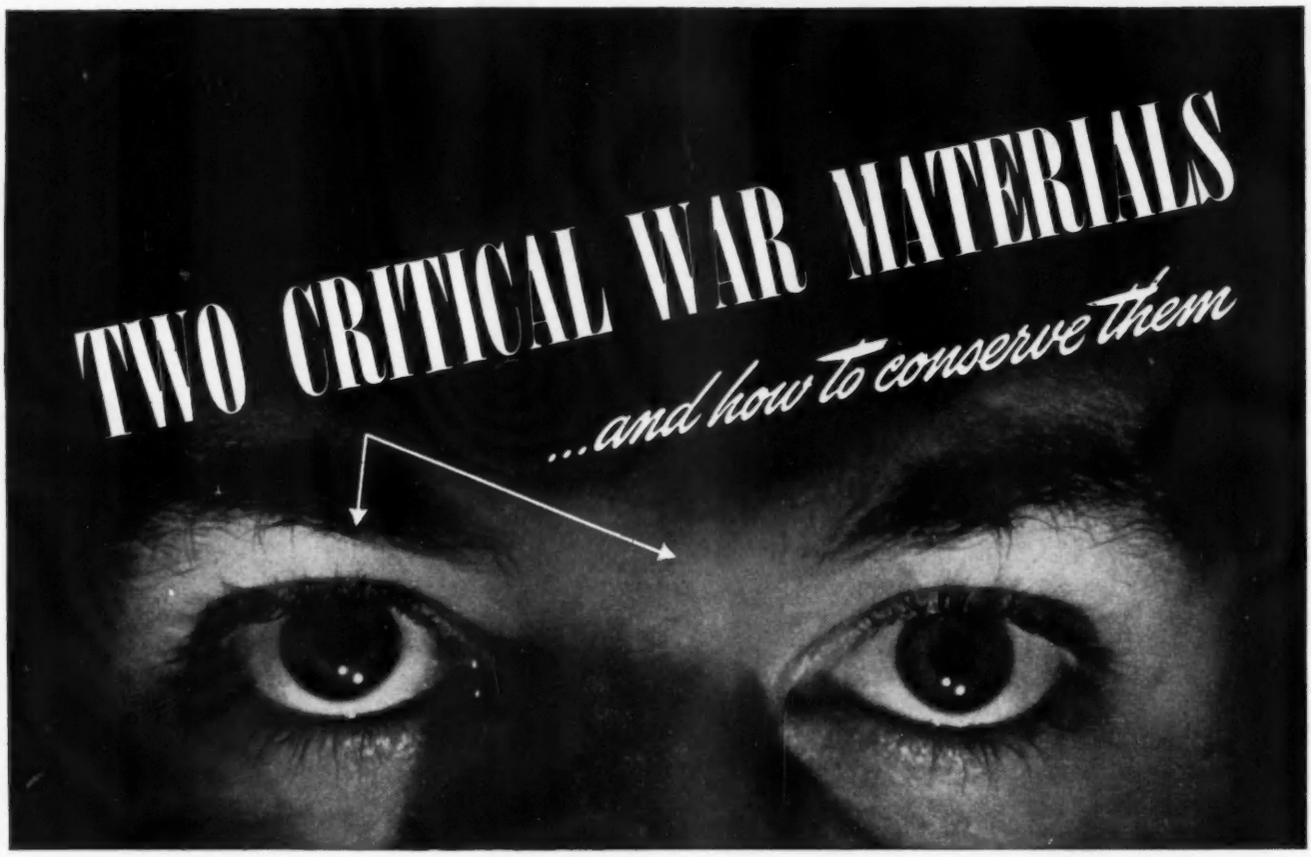
The more common devices now in use to reach a lighting fixture are: ladder, movable platform, and lowering hanger. The choice is not always easy. Conditions will largely determine the best solution, but in theory a decision can be reached on the basis of cost computations. This is done by first establishing the labor cost of a single relamping with each device and then, based on the number of lamp renewals needed per year, determining the overhead cost of the equipment per renewal. The most economical is, of course, the one which shows the lowest combined cost of renewal labor plus overhead.

In general, it will be found that each device has an important place in the picture. Ordinarily, where very large numbers of units are to be serviced, the movable platform is the cheapest. Where there are a medium number of units, a ladder is least expensive. Where there are only a few, the lowering hanger is the most economical.

However, where a movable platform cannot conveniently be moved about on the floor to bring the maintenance man to the fixture or where the design of the building makes the use of a ladder impracticable, the lowering hanger is not only the best but is often the only solution.

Fluorescent lighting equipment can occasionally be serviced from a catwalk designed especially for the purpose or, if the layout is carefully planned beforehand, they may be serviced from a truss or modified truss paralleling the fixture. Such a system would be unusual but, where possible, should be provided. Serv-

*Westinghouse Lamp Division, Bloomfield, N. J.



●Thirty-seven million war workers man America's front line of fighting production—seventy-four million eyes that must not be wasted or abused.

Even more! They should have lighting that lifts the strain of their work—helps attain required close tolerances and reach production goals.

Right in your own territory there are war plants which need the cool, glareless, shadowless illumination of fluorescent lighting.

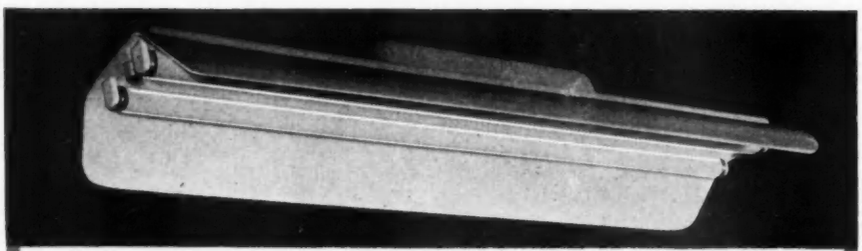
And consider this: When you equip a plant, and production is stepped up, you've contributed thousands of man-hours to the war effort.

Because of this improved efficiency without the need for additional copper wiring, virtually every plant engaged in war work qualifies for priorities on fluorescent lighting.

Ever since the first commercial and industrial use of fluorescent lighting, Sylvania's leadership has been based on its progressive technical developments. These continuous advances have produced Sylvania Lamps which today deliver these results:

They give more light, more lumens per watt. They are longer lived. They have a more uniform coloring. They have a finer, smoother coating.

So get to your war plants. Help them step up production. If you wish, our representative will gladly assist you in securing the necessary priority rating.



Miralume Fixture HF-100P with composition reflector. There is a complete line of Sylvania Fluorescent Fixtures available to fit any industrial need. From the standpoints of economy in use of critical materials, color and quantity of light, and light distribution, these fixtures provide the last word in fluorescent lighting efficiency. They are obtainable, on priority, by plants engaged in war work—upon proof of genuine need for better lighting.

SYLVANIA

ELECTRIC PRODUCTS INC.

formerly Hygrade Sylvania Corporation
Salem, Mass.

Incandescent Lamps, Fluorescent Lamps, Fixtures and Accessories, Radio Tubes, Electronic Devices.

icing of fluorescent lighting fixtures from a traveling crane requires a suitable safe operating platform which should be provided when the crane is installed.

A Typical Large Installation

Consider a war production plant with 10,000, 40-watt lamps burning 20 hours a day and 25 days a month throughout the year. The relamping problems here are startling.

Substituting in the formula and computing the average number of replacements ultimately to be required, that is, 10,000 times 500 times 12 divided by 2500 equals 24,000 lamps to be replaced per year, or 2000 lamps per month after the first few relampings. That would be a sizable maintenance job, but the ultimate average replacement rate of 2000 per month is only about half of the peak replacement rate that occurs at approximately 2500 hours and again at approximately 5000 hours.

The replacement curve reaches a peak of almost twice the average replacement rate after the lamps have burned about 2500 hours. This means that whereas 2000 per month or about 80 lamps per day would be relamped after the replacement curve levels out, over 130 lamps per day would need to be replaced during the first peak period which, in this instance, would occur at about the fifth month.

It is obvious that in installations involving large numbers of lamps such as are now being installed particularly in some of our new war production plants, the maintenance engineer must anticipate not only the average renewal rate but must lay his plans to handle the peak load when it comes.

When to Remove a Lamp

It should be noted that the fluorescent lamp blinks on and off when it reaches the normal end of life. This blinking is caused by the high voltage that develops in the lamp when the emission material is worn away from both of its electrodes. This high voltage causes the glow switch, normally used, to switch the lamp alternately on and off. Blinking should not be permitted to continue for more than an hour or so or the starters will be destroyed and perhaps the ballast will be overheated and damaged. This means that all of the above requirements, ready access to the fixture, proper fixture design for quick relamping and maintenance planning are especially important; otherwise, the switch damage and possible ballast damage will represent extra operating cost of the lighting system.

Special cutout devices are now available to prevent the blinking from continuing beyond the danger point. The 85-watt, type RF, lamp now requires no starter. Therefore, in certain instances this becomes an advantage from the maintenance standpoint of sufficient importance to be considered in planning the lighting installation.

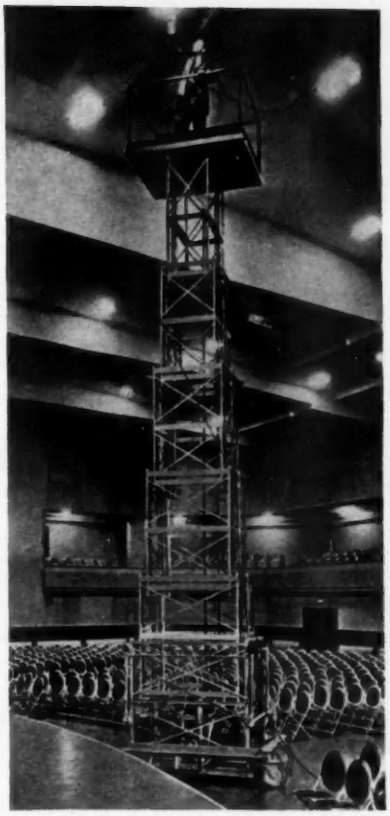
Choice of Size and Type of Lamp

Naturally, the fewer the lamps used and the longer the lamp life, the less will be the lamp replacement problem. This would lead to the use of larger sizes of fluorescent lamps to reduce relamping cost. The 85-watt lamp has a 3000-hour life and requires no starter so it is especially well suited for installations where relamping is difficult. The 100-watt lamp with its high output reduces the total number of units required for a given lighting job and is also well suited to large installations where lamp maintenance will represent a serious problem.

Group Replacement

Fluorescent lamps have, on occasion, been installed in fixtures with which relamping is extremely difficult and expensive. Some of the early fixtures, for example, required special tools and had to be partially dismantled in order to remove burned-out lamps and install the new ones. Also, some fixtures are located where access is difficult and where it is extremely costly to relamp and maintain the fixture. In such cases, group replacement, familiar to most lighting engineers in connection with incandescent lamps, should be used.

In practice, the simplest method is to replace all the lamps in the fixture or group of fixtures each time access is obtained. Those lamps which are not burned out may be used, if necessary, in other more accessible fixtures.



Lighting adjustments and maintenance in this large auditorium, where fluorescent lighting fixtures are mounted extremely high, can be speeded by using an automatic telescoping tower. (All Westinghouse Photos.)

Group replacement may also be found to reduce the overall lighting cost if applied to an entire lighting system where access to the fixture is an appreciable cost item or where it is vital that a minimum number of lamps be inoperative at any one time. Operating under such a plan, a maintenance engineer would anticipate the approximate time of maximum replacement. Such a time could be estimated from the accompanying replacement rate curve. For good results, the lamps should be replaced shortly before the period of peak mortality or peak replacement. In this case, the lamps that are removed before failure, can be used elsewhere or destroyed, depending upon conditions.

Obviously good lighting at minimum cost requires easy and regular maintenance. Therefore, if preparations are made ahead of time for relamping, considering the peak as well as the average replacements rates, then long range lighting satisfaction will be assured.

A Wholesaler's Salesman is back of Every Housing Project

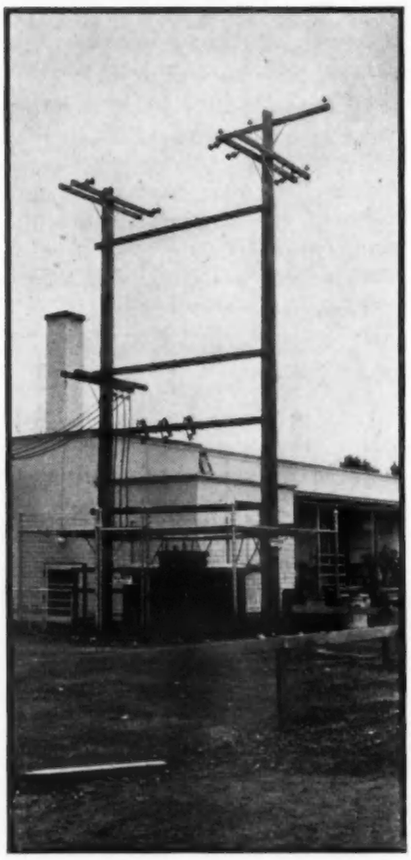
Yeoman service by wholesalers' salesmen prevents delays, speeds construction of housing projects in vital war production centers. Ralph Tynan, who did the work in this story, is a typical case

IT has taken many housing projects in a certain Pacific coast city, to absorb a population that almost doubled in a year or so because shipyards and other defense industries have located there. One of those projects is named the Hudson House Dormitories. It was sponsored by one of the yards and built with funds provided by the Federal Housing Authority.

If time were taken to run such matter down, it would be found that back of all such projects some wholesaler's salesman did yeoman service, helped to engineer the project, expedited materials, "errand-boyed" emergency calls, put in long overtime hours to see it through to completion.

The object here is to high-light the performance of one such a salesman on a given housing project, Hudson House. He happens to be Ralph Tynan of the ..... Electric Supply Co. Undoubtedly hundreds of Ralph Tynans exist in other parts of the country, where defense projects and defense housing are under way, whose efforts in the great emergency have gone pretty much unsung.

This particular project called for ten two-story dormitories, of frame, sub-standard construction, to house 3900 single men who work in the neighboring industries. Included in the group was a mess hall to serve all of these men on a three-shift basis. The George H. ..... Co. was the general contractor, working on a cost plus basis, with Wolff & Phillips as architects. Their designs, incorporating new features in the arrangement of room space and facilities, subsequently have served as a pattern for dormitory construction throughout the country, according to Paul H. O'Donnell, government engineer in charge of the job.



A wholesaler's salesman helped in getting the special transformer equipment that was needed to handle the mess hall and electric kitchen equipment at this West Coast Housing Project. 3900 men are fed in 3 shifts each day.

Electrical work on this group of structures was done on a sub-contract by the ..... Electric Co. and J.....-S..... Electric Co., a combination of two leading electrical contractors, who supplied all the materials and equipment and installed the interior wiring and outside distribution. That the whole project was completed in near record-breaking time was in no small measure due to the extraordinary services and attention, extended by salesman Tynan.

Construction work on the first five units of the project was started April 10, and they were completed June 12. The second five were started June 6 and completed July 17.

In the afternoon of Friday, April 10, Tynan received a call from the

By Henry W. Young

Hudson House dormitories are capable of housing 3900 single men. These houses together with mess hall and kitchen were completed in 97 days. Half of them were tenanted before the other half was finished. Below: A close-up of the housing project where a wholesaler's salesman gave invaluable service to help speed construction.

electrical contractors that the hit and run play was on. There was no time to call for prices and bids. They had to lay out the temporary electrical work and prepare for at least some flood lighting that same night.

Tynan and the contractors together laid out the temporary work that afternoon for flood lighting, power saws and similar equipment used in construction. As soon as the schedule of temporary materials was compiled, Tynan rushed back to the warehouse, although it was already after closing time. He opened up and began getting out transformers, flood lights and wiring material for the temporary work. As soon as the contractor's trucks arrived, part of the work got under way, sufficient to enable the contractors to put up some of the floodlights that night as they were needed by the general contractor.

The next step was to get all the materials and equipment for the permanent installation lined up and ordered, so that it would arrive on the job as fast as required.

The ..... Electric Supply Co.'s office is not open Saturday, but as far as salesman Tynan was concerned there was no closing time that week-end. Working with the contractors again all day Saturday and Sunday, they got most of the materials listed, although the plans were not all available at the start. The plans were delivered more or less piecemeal and as fast as they came through they were grabbed up and the computations made.

The following list of major materials gives some conception of the magnitude of the week-end job for all concerned, although a hundred and one other details had to have attention. Many transformers, in units of from 25 to 150 kva; many panel boards; thousands of feet of armored cable; thousands of feet of rubber-covered wire; large numbers of fire alarm gongs, fire alarm stations; special equipment for mess hall and complete electric kitchen, switches and wiring devices of all sorts were necessary to such an installation. When it is remembered that the dormitory buildings are large and have long wings, and that at one time there were over 100 electricians at work on the wiring, some further conception can be had of the job that salesman Tynan had on his hands to get the materials to flowing in quantities to keep the electrical end moving. There were 25 to 30 suppliers to deal with and most of the priorities had to be arranged for after ground was broken.

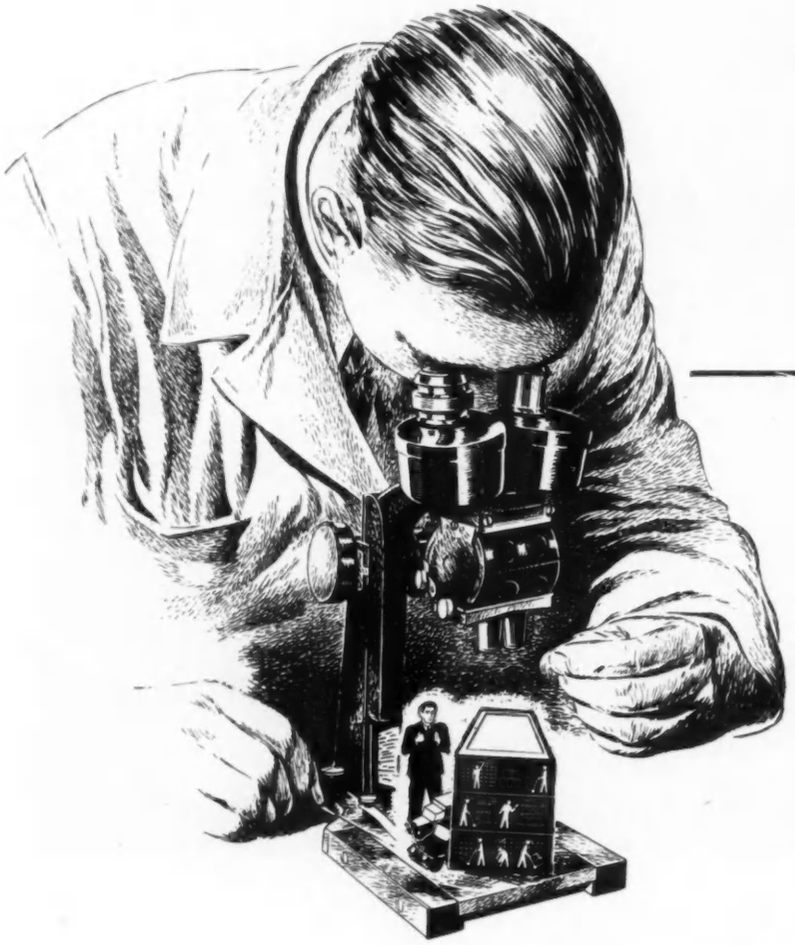
By Monday that first week, most of the electrical materials were lined up and the orders wired into the factories. After that, it was a matter of his keeping on the job every day of the week, often driving there several times a day, wiring and telephoning suppliers and, furthermore, sandwiching this job in with others of a similar character.

In commenting on the work, the Government engineer on the Hudson House job said:

"The electrical as well as all the other subcontractors on the job were among the most cooperative in my experience. Their untiring efforts and devotion to detail were instrumental in the rapid progress of the work. The rushing of these buildings through to completion established an all time record for this type of project.

"The sponsoring company and I camped on the priorities situation to secure releases on all classes of material, and the .... Electric Supply Co., and their Mr. Tynan, were helpful and cooperative on the priorities end as well as in the procurement of electrical materials and supplies in a steady stream, so that the work was not held up for lack of them at any time."

Electrical Wholesalers U



IN a timely survey recently published by The Twentieth Century Fund entitled "Does Distribution Cost Too Much?" certain conclusions were stated as a result of their comprehensive studies.

1. "There is little evidence of general high profits being made in the field of distribution considered as a whole. It is safe to conclude, therefore, that if distribution does cost too much, it is not primarily because of 'profiteering' but for other reasons."
2. "If the cost of distribution is to be reduced, economies must be gained either by eliminating functions and services now offered by distributors or by performing these functions more economically and efficiently." Progress in this direction is made difficult by demands of the wholesale distributors' customers for variety of goods, immediacy and frequency of dediveries and servicing, and convenience of location of goods in relation to the customer.
3. "If consistent effort is made to discover the facts, savings can undoubtedly be effected. However, as long as the distributor does not know what it costs to sell small accounts, fill small orders, grant credit, accept returned goods or grant allowances for this or that, just so long is he apt to excuse high costs. He thinks he is compelled to render such services because his competitors do. Thus he argues that they are merely a form of advertising or sales promotion. Such reasoning may be sound enough if he knows what the services really cost, but very few distributors do know what they cost."

It therefore would seem useful to examine the figures for one type of wholesale distributor which has operated in the rapidly changing and expanding electrical industry, and see what progress has been made in reducing the cost of rendering more and improved services to its customers.

The Critical Period of Development of the Electrical Wholesaler

In 1929 there was taken the first comprehensive Census of Distribution, which was followed by interim censuses for 1933, 1935 and 1937 (on a sampling basis) and the regular decennial census of 1939. The figures on electrical wholesaling, published as a part of these census analyses, furnish an authoritative and illuminating history of the economic progress of electrical wholesaling in that period. This was a most critical period, which began with a four-year struggle for survival. After the electrical wholesaler's financial resources had been greatly depleted, beginning in 1933 it was necessary for him to expand his functions and services to handle the rapidly growing volume of specialty appliance business and other new developments in the electrical industry. More recently the electrical wholesaler has had to adapt his personnel and physical and financial facilities to handling government and other war contracts involving large dollar values and extreme speed of service under difficult conditions of retarded deliveries, and to adjust for the large volume of appliance business which has disappeared due to government restrictions on the

By L. M. Nichols

Under the Microscope

use of scare materials in the manufacture of such appliances.

Expansion of Electrical Wholesalers' Functions and Services

At the beginning of the period covered by this survey (1929), the accepted definition of a full function electrical wholesaler was "a firm or corporation performing the following functions:—

1. Maintains and warehouses an adequate stock of standard electrical commodities sufficient to supply the trade.

2. Maintains delivery service and facilities for pick up service.

3. Maintains a selling organization trained to promote, specify and quote on electrical commodities, and to handle properly matters of service or misunderstanding with customers.

4. Distributes catalogs showing and describing the most essential items in common use in the industry.

5. Extends justified credit to the buyers within his territory upon reasonable terms."

Under present day requirements,* the electrical wholesaler must—

1. Maintain a specially trained and adequate force of inside and outside salesmen who can

1.1 Tell customers how, when and where each product is used.

1.2 Keep industrial engineers promptly informed on new products and new methods that facilitate production or maintenance.

1.3 Make "on the spot" demonstrations of new devices of interest to industrial buyers.

1.4 Make voltage and other tests when there is trouble from improper wiring or overloading.

1.5 Make foot-candle tests and sample installations leading to better lighting installations, saving of eyesight, with fewer errors in clerical and manufacturing operations.

1.6 Help contractors take off material lists from specifications,

*Summarized from survey — "Wholesaler's Salesman," May 1941.

A MANUFACTURER APPRAISES THE VALUE OF WHOLESALERS

The question, sometimes raised as to whether the wholesaler performs these functions more economically and at as low a cost to the ultimate buyer as the manufacturer could, was recently answered by a prominent independent manufacturer as follows:

"Forty years of experience has convinced us that, in this type of business at least, wholesaler's distribution reduces the manufacturer's distribution and selling cost and therefore reduces the selling price of electrical supply material to the user. In support of this contention, let us present the following:

"To answer all the various government department inquiries and to execute all the bids alone, in addition to all private inquiries, would require us to increase our staff many fold.

"To handle orders from thousands of sources, mostly in small quantities, would require a tremendous expansion of our order, service and filing departments.

"To handle thousands of accounts and billings would cause an enormous increase in our credit, accounting and auditing departments.

"To follow claims, engineering and installation problems of thousands of users, would require us to greatly expand our field force.

"At present these functions are smoothly and ably performed by a strategically located group of distributors, who can handle them much more efficiently and economically than we could, and without adding as much to the cost of our product, largely because they maintain complete service organizations for the purpose and spread the cost over the products of other electrical manufacturers, as well as ours. Thus, they eliminate the duplication of these costs to all such manufacturers."

leading to sounder bidding.

2. Pay adequate salesmen's salaries, commissions and traveling and entertainment expense, out of a constantly diminishing gross margin rate per transaction.

3. Have executives, specialists and salesmen competent to furnish engineering service on government and other war contracts. In a booklet entitled "Explanation of Principles for Determination of Costs Under Government Contracts," mention is made of admissible selling expenses related in whole or in major part to technical, consulting and other services of application and adaptation of products to the uses and requirements of the customer, stating that—

"men who are nominally or actually attached to the sales department but who are primarily technicians and product service engineers render services quite as important and necessary when products are sold to the government as when they are sold to other customers. In such cases before a sale can be effected some problem of application or design or capacity often exists, and must be solved by the field representatives, backed up, if necessary, by a suitable technical organization, before the customer can place his order correctly."

4. Have his salesmen, edit and price and quotation clerks, and counter men keep up to date on technical products handled, their uses, codes and local rulings. They must also be able to inform customers of the many involved priorities restrictions and the basis on which the proper ratings may be placed and extended in order to get deliveries from manufacturers essential to the conduct of the War.

5. Supply catalogs and frequently changing price sheets free to customers.

6. Extend credit up to 90 days or more, but must pay manufacturers promptly; must also absorb bad account losses varying from one-half to two percent which may wipe out the major portion of his net income.

7. Provide storage and speedy handling facilities for a constantly larger variety of products, and maintain adequate stocks of hundreds of manufacturers' lines.

8. Follow up stock orders, back-orders, pick-up and direct shipments (many successive part shipments) and expedite such shipments by expensive telephone calls and telegrams, air mail and special delivery letters, air and express shipments.

9. Absorb the expense of many more incoming split and L.C.L. shipments from manufacturers, and part shipments and special deliveries to customers.

10. Deliver to the customer at the

TABLE A

Sales Volume (T)

	1929	1933	1935	1939
General Line	$413,804		$184,233	$300,377
Apparatus and Equipment	77,856	$188,745	20,931	24,214
Wiring Supplies and Constr. Mat.	(x)		76,859	126,738
Radios	316,274	39,409		112,435
Refrigeration	38,755	47,685	294,519	118,018
All other	(x)	(x)		106,242
TOTAL	$846,689	$275,839	$576,542	$788,024

Per Cent Expense to Sales

	1929	1933	1935	1939
General Line	16.9%		14.6%	13.4%
Apparatus and Equipment	18.7	21.8%	21.1	22.7
Wiring Supplies and Constr. Mat.	(x)		18.8	17.5
Radios	15.9	22.9		19.0
Refrigeration	22.5	23.6	18.2	17.0
All other	(x)	(x)		20.1
TOTAL	16.9%	22.3%	17.4%	16.6%

(x) Included in General Line.
(T) Expressed in thousands of dollars.

TABLE B

Electrical Wholesalers by Classes	No.	Sales (T)	Per Cent. to Total Sales—Sales to Retailers & Contractors	Ind. & Utilities	Wholesalers (x)	Export	Consumers
General Line	455	$300,377	44.1	51.9	1.3	2.0	.7
Appts. & Eq.	207	24,214	26.5	52.6	13.0	6.1	1.8
WS & Cons. Mat.	955	126,738	41.4	44.0	11.7	.3	2.6
Radios & Eq.	668	112,435	89.5	3.5	2.5	1.4	3.1
Refrig. & Eq.	159	118,018	68.3	15.6	11.4	1.6	3.1
All other	628	106,242	76.7	8.5	10.5	1.0	3.3
TOTAL	3,072	$788,024					

(T) Expressed in thousands of dollars.
(x) "Pick-up" service and sales to sub-jobbers.

Timely and of direct interest to our readers, this material was originally published under the title, "A Case Study of Economic Progress in Distribution" in *The Controller*, September, 1942.

Its editor points out that

"Apart from the obvious advantages accruing to the purchaser in terms of service and maintenance facilities available through the distributor, Mr. Nichols' study shows that, by distributing costs over a large number of products, **each product can be distributed more widely and at less expense than would be possible if each electrical goods manufacturer were to attempt his own distribution."**

We thank the Controllers Institute of America for permission to reprint the article in WHOLESALER'S SALESMAN.

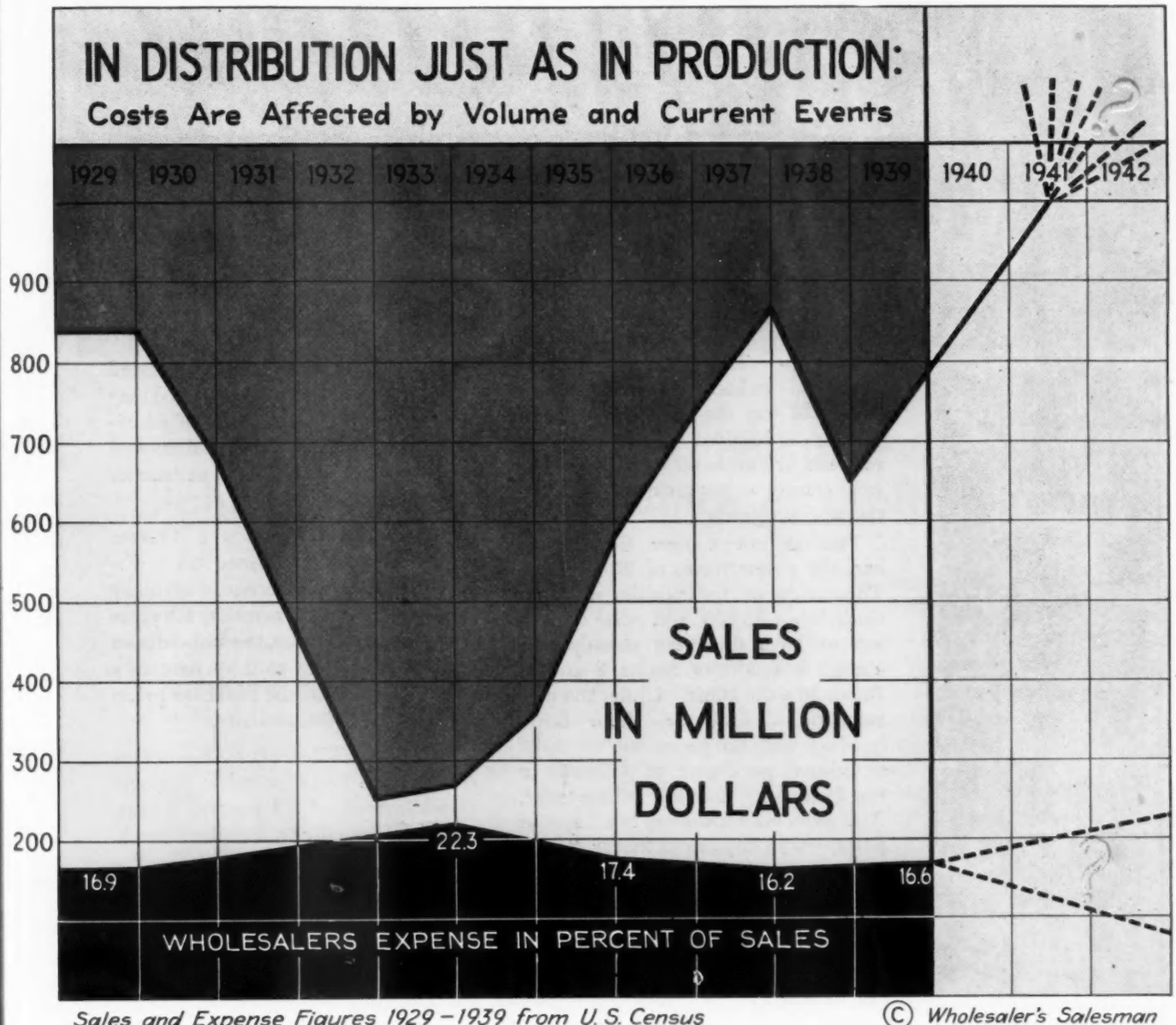
The Editor

point of use in a single delivery a large variety of material produced by different manufacturers, otherwise impossible to assemble at that point without weeks of delay. Split down quantities to be delivered to suit the customer's exact day by day needs and assemble into a single shipment many sizes, types and quantities of the products of many manufacturers.

11. Furnish adequate servicing, repair and refinishing facilities for an ever-growing variety of appliances and technical apparatus, such as motors, absorbing the expense of returning defective parts to manufacturers in obtaining adjustments thereon.

12. Check a larger number of receiving and shipping records, check and pay a larger number of invoices, issue a larger number of bills and statements, keep new and complicated "priorities" and "end-use" records, keep books and follow for collection slower accounts, accept returned goods, issue credits and adjust claims regardless of how distant manufacturers ultimately adjust, maintain in good operating condition, trucks for delivery serv-

(*Continued on page 58*)



Sales and Expense Figures 1929–1939 from U. S. Census

© *Wholesaler's Salesman*

Facts and figures here interpreted, were taken chiefly from U. S. Census Reports, prove conclusively that certain essential functions and services are performed speedily and economically, even under such constantly, often drastically changing conditions, as characterize the years 1929-1942

TO EXECUTIVES:

NOW YOU CAN HELP

Even more...

New Treasury Ruling Permits Purchases UP TO $100,000, in any Calendar Year, of Series F and G WAR BONDS!

The Treasury's decision to increase the limitations on the F and G Bonds resulted from numerous requests by purchasers who asked the opportunity to put more money into the war program.

This is not a new Bond issue and not a new series of War Bonds. Thousands of individuals, corporations, labor unions, and other organizations have this year already purchased $50,000 of Series F and G Bonds, the old limit. Under the new regulations, however, these Bond holders will be permitted to make additional purchases of $50,000 in the remaining months of the year. The new limitation on holdings of $100,000 in any one calendar year in either Series F or G, or in both series combined, is on the cost price, not on the maturity value.

Series F and G Bonds are intended primarily for larger investors and may be registered in the names of fiduciaries, corporations, labor unions and other groups, as well as in the names of individuals.

The Series F Bond is a 12-year appreciation Bond, issued on a discount basis at 74 percent of maturity value. If held to maturity, 12 years from the date of issue, the Bond draws interest equivalent to 2.53 percent a year; computed on the purchase price, compounded semiannually.

The Series G Bond is a 12-year current income Bond issued at par, and draws interest of 2.5 percent a year, paid semiannually by Treasury check.

Don't delay—your "fighting dollars" are needed *now.* Your bank or post office has full details.

Save With . . .

War Savings Bonds

This space is a contribution to America's All-Out War Program by WHOLESALER'S SALESMAN

It's the ADMIRAL now!

WAKEFIELD ACE DONS WAR CLOTHES

New name . . .
same high efficiency

Use these facts to help you on lighting for war plant office or drafting room

Here's a "non-metallic reflector" fixture that's a honey for office space! It's "tops" to look at and "tops" to see by!

Redesigned to conserve strategic war materials, the former Wakefield ACE now becomes THE ADMIRAL. And in its new war clothes the ADMIRAL does double duty . . . saves about 27 pounds of steel on each 4-lamp unit (almost enough for a .30 caliber machine gun) . . . and continues to provide the same high efficiency light to help speed vital paper work.

In the new ADMIRAL we've retained the desirable lighting characteristics of the former unit . . . 90% of the light down on desktops or boards . . . 10% of the light to the ceiling to avoid harsh contrasts.

The new frame is made of carefully selected kiln-dried, first-grade birch, finished in walnut. Louvers are of selected bass-wood and hinged to permit easy relamping. All wooden pieces are anchored with metal and cemented with glue to withstand changes in humidity.

The reflector is of Masonite reflector board and is bent to form a "V" shaped deflector between each pair of lamps. Highly efficient reflecting surfaces are provided by two coats of infra-red enamel over one coat of primer.

The ADMIRAL is standard in 2, 3, 4 and 6-lamp units and may be secured for continuous runs on special order. Write for details.

THE F. W. WAKEFIELD BRASS COMPANY

112 SALES PARK VERMILION, OHIO

America needs a Food Administrator–NOW

IN war or in peace, you and your fellow Americans require 1,465 lbs. (raw weight) of food every year. Soldiers require even more.

In all, for ourselves and our allies, America must produce, process and transport 250 billion pounds of food per year, for the duration, and for many years thereafter.

► Don't try to remember that figure, but *do* remember that food processing is a huge industry, in a high state of technical development, but not yet fully coordinated into the war effort.

The food industry needs over-all coordination, comparable to long-last rubber coordination. America needs an administrator of food supply; to assure priorities in equipment and transportation and to end conflicting and overlapping committee jurisdiction.

If the food supply gets into a tangle, through lack of a comprehensive plan, the result will make the rubber shortage seem a picnic in comparison.

► In the impending pandemonium, the Food Production Engineer will be strictly in the middle. He is neither a grower nor a global strategist, but a production man who must needs wait for government to call its shots on growing, equipment production and distribution.

The Food Production Engineer must see that the food is grown in proper quantities, at proper distances from his plant, and delivered in perfect condition . . . From that moment, he has all the problems of ordinary manufacturing, plus the job of contriving to retain the fleeting qualities of color, aroma, taste, texture and nutritive value which nature intended only for a few brief hours of ripeness.

That was tough to do, even in the days of unlimited refrigeration and canning. But under the urge of saving cargo space for men and munitions, new miracles have been worked.

Fortunately for us, in the continuous battle between bulk and low cubic content, the latter is winning.

Food Production Engineers—by developing machines and processes for trimming and compressing—have reduced whole sides of beef to a carton the size of a suit box.

► They have replaced sunken refrigerator ships by lining the holds of ordinary cargo vessels with boxes of frozen lard. Preserved by this Yankee "ice house" trick, frozen meats arrive overseas in perfect condition—while the lard goes to allied explosives plants for making TNT.

Eggs, stripped of their shells, travel through a fabulous array of processing machines, leaving space-taking water in America, but sending every ounce of energy-giving food value to our far-flung armies and allies.

When the Food Processor gets through with a basket of ripe tomatoes, you can hold the resulting cellophaned package in the palm of your hand . . . and only replaceable water has been lost.

► The work these men are doing will easily be the equivalent of launching a ship a day, as the processes which have been perfected are applied in more and more food plants.

If, under the constant pressure of tire, tin, and freight-car shortages, you find yourself sitting down to meals of dehyrated meats, fruits and vegetables, you can thank the Food Production Engineer for the fact that the tomato dishes will be ripe—red and delicious in taste, that soups are full-flavored and nourishing. That nothing has been lost but the water you have replaced.

Reprints of this advertisement are available in handy booklet form.

McGRAW-HILL PUBLISHING COMPANY, Inc.

330 WEST 42ND STREET • • NEW YORK

Construction—Builder of Bases

America's Great Peacetime Industry Goes to War

PUNCHED through 1,600 miles of trackless wilderness and rivaling the Panama Canal in strategic importance, the Alaska Highway will cut days and dangers from present supply routes . . . to Alaska . . . to the Aleutians . . . yes, to Japan itself!

This job, to be finished soon and well ahead of schedule, is but one example in thousands illustrating how construction sets the stage for our war effort . . . and why the construction engineer is vital to victory.

Back of America's busy production lines, expanding shipyards, growing cantonments and far-flung military bases is a series of swiftly executed construction jobs. Important jobs! *For the construction industry is a builder of bases. Bases for production—for training—for defense—and for attack.*

To conceive and to carry through so tremendous a program in a race against time is typically American. It requires enterprise and the sort of versatility that has been acquired by undertaking every kind of job; from a Boulder dam to a drydock, from a Pennsylvania Turnpike to a housing project, from a Radio City to a railroad tunnel . . . and taking it in stride. War's demands in the eyes of America's construction men, are simply more of the same—for a grimmer purpose, and under heavier pressure.

The civil engineers who develop the necessary designs, the contractors who execute them and the manufacturers who provide the equipment and materials, are as much a part of this war as are the men who face the enemy. The results of their labors are recorded in mounting production figures, and will be indelibly written in the military annals of this war. Those 60,000 airplanes, 45,000 tanks and 8,000,000 tons of shipping that the President asked for in 1942 will be supplied because—and only because—the construction industry did a Herculean plant-building job first—and fast.

This is the fifth of a series of editorials appearing monthly in all McGraw-Hill publications, reaching more than one and one-half million readers, and in daily newspapers in New York, Chicago and Washington, D. C. They are dedicated to the purpose of telling the part that each industry is playing in the war effort and of informing the public on the magnificent war-production accomplishments of America's industries.

Yes, construction, America's great peacetime industry, has gone all out for war. From a normal 6½ billion dollars in 1938, it got into its war stride last year with a 11½ billion dollar volume. And under the impetus of Pearl Harbor, the 1942 figure now promises to reach the unprecedented total of 15 billion dollars. "If buildings would win the war, Hitler would be licked now", said Lieut. Gen. William S. Knudsen recently. Which emphasizes the further fact that the construction industry was the *first* to go to war.

The technical and managerial talent that is accomplishing this mammoth job has had to find its strength and resources within itself. No possibility of "conversion" here! Only years of varied construction experience enabled it to tackle and to achieve the manifold tasks that building for war demands.

Take that cornfield, for instance, that Henry Ford picked for his record-breaking bomber plant. The spring mud was soft and deep when contractors moved in last year. They were entering a race against an almost impossible time limit. Before they could even begin on the plant itself, they had to build roads, lay a 4-mile water supply line and install a complete sewerage system with its disposal plant. But such varied jobs—each big in its own right—merely were antecedent to running up the framework and enclosure for the 60-acre factory itself. Or to using road-building methods to pave a floor that was the equivalent of 25 miles of 20-foot wide concrete highway.

It was a race against the approaching winter, and to win it they had to push their $1,000,000 worth of construction equipment to the limit—day and night. But win they did! It is accomplishments like these that explain how the nation's aviation factory floor space jumped from 18,000,000 to 60,000,000 square feet in

the past two years . . . why Fortresses and fighter ships are beginning to turn the scales of war in our favor.

"Somewhere in the Southwest" the Army called for a training base. The contractor who answered that call summed up his performance in characteristic fashion: "Beginning without so much as a contour map we had a $10,000,000 project ready for operation within 90 calendar days, and saved 3½ million dollars of the estimated cost".

At another Army camp a contractor assembled a crew of 20,000 men who put together 1,400 buildings in 125 working days, along with a sewer system, a water-supply and a street layout of which many a fair-sized city might be proud. This job swallowed up 2,000 carloads of lumber, and 26,000 kegs of nails. So perfect was the teamwork, from the general manager down through the hundreds of superintendents and foremen to the specialized crews, that as many as seventy buildings were erected in one single day.

But versatility and experience are not the only qualities that the construction engineer has in his tool chest. He has ingenuity, and he needed it when steel, copper, zinc and aluminum had to be used for combat equipment, and were denied him. Great hangars, conventionally of structural steel, were turned out with record-breaking timber arch spans. Reinforced concrete factories were designed to require only 3 lb. of steel bars per square foot instead of the customary 5 lb. Asphalt-impregnated paper was substituted for copper in flashings, cement-asbestos for galvanized steel in duct work. In the face of a materials shortage, he continued to build bases—safely, economically, and on time.

Construction ingenuity, too, is back of the records in Liberty ships, in war housing and a host of other facilities. Indeed, it was the construction industry that stepped forward to assume the bulk of the emergency shipbuilding program, leaving established yards free to handle more specialized Navy work. Naturally, it was easy for civil engineers and contractors to build the shipyards, but building ships was another story. It is a far cry from steel ships to conventional engineering structures, yet, drawing upon their bridge and building experience, the men of construction have turned out ships faster than they were ever built before.

How was this possible? . . . because the construction man sees every job as a new problem, views every precedent as something to be discarded in favor of something better. So instead of assembling the myriad separate pieces of each ship on the ways, he fabricated them into huge built-up sections. These he swung to the ways and welded them into place in a fraction of the time required by old methods.

Again, the demands for wartime housing for workers in industrial areas, at Navy bases, and near Army concentrations, have altered the meaning of "residential construction". The building of individual houses has given way to a form of multiple-unit project that calls for the skilled services of the architect, the civil engineer and the large contracting organization. On one such project, for example, a contractor experienced in large building and bridge construction employed an extensive system of prefabrication and site assembly that made possible the completion of 5,000 houses for war workers within five months.

All these activities, within the United States, parallel the achievements of other industries that serve the men at the front. But construction knows no continental limits. Its men are serving throughout the network of defense bases built in the West Indies, Greenland, and Iceland, and in the offensive bases that are taking form in the jungles and deserts of Africa, the harbors of the Persian Gulf, and the plains and mountains of Australia and Alaska. Already in this war, as in the last one, construction crews, like those at Wake and Guam, have dropped their peacetime tools to fight shoulder to shoulder with their comrades in uniform. Construction follows the flag to the farthest outposts in this global struggle.

* * * *

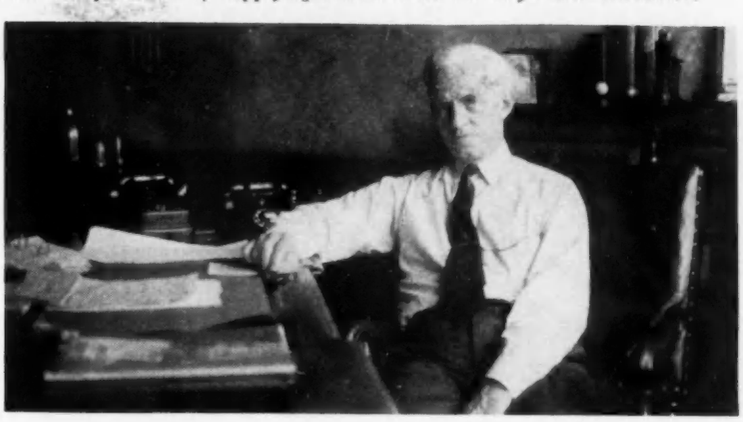
But while the construction industry thus serves the special needs of the armed forces, it must look after its job at home. It must keep the highways serviceable, the water supply safe, sanitary facilities adequate. There are home chores that cannot be neglected even in war.

And when we finish our No. 1 task of winning the war, the construction industry will again be called upon to help re-establish peacetime employment and to stimulate the normal industrial activities of the nation. It will raze, redesign and rebuild; it will bring modern sanitation to urban dwellers; it will safeguard fertile areas and cities from disastrous floods; it will improve all forms of transportation; it will design and build the facilities that will be needed to reconvert from war to peace. Its vision, versatility, experience and ingenuity will be as indispensable then as they are vital now.

Today it is building the bases that are needed back of every battle-line. Tomorrow it will build for a new and better era. Today it is laying the foundation for the victories that must be ours. Tomorrow it will lay the foundation for the peace that will follow these victories. In war and in peace the construction industry is the builder, the harnesser of nature's forces.

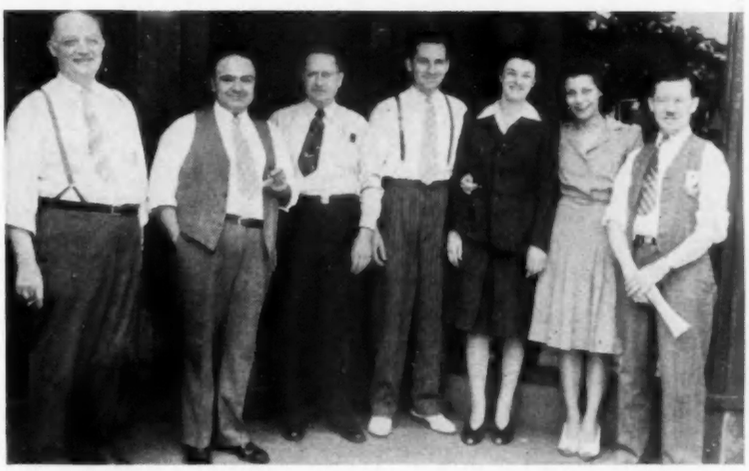
President, McGraw-Hill Publishing Company, Inc.

Relaxing, even for a photograph, is unusual for Waldo Turner, president of Turner Electric Supply Company, Detroit, Mich. Usually he's tied up with the problems of supplying materials to the city's war industries.



The CAMERA CLICKS at Turner Electric Supply Co., Detroit

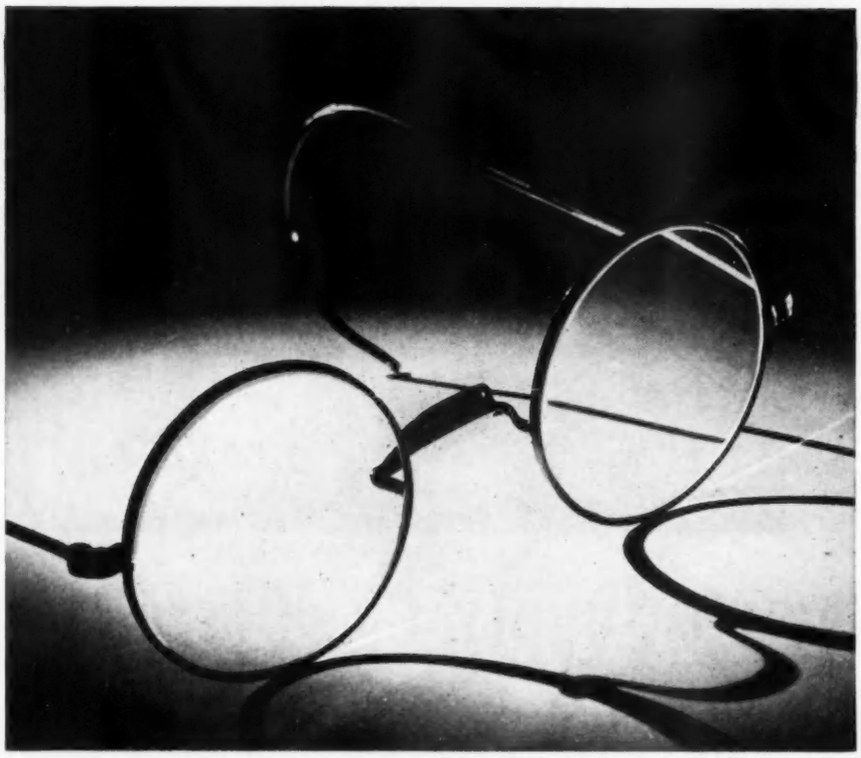
W. L. Startsman has been manager for the past 20 years. He started in the electrical supply business with the old Post Glover Company.



A total of 130 years experience in the wholesale electric supply business is represented in this group above. Left to right, they are: W. L. Startsman, manager; ex-New Yorker David Riscalla, salesman; Henry Frazho, sales department, with 30 years experience; A. H. Gatwood, sales manager and "priorities expert," who was with Franklin Electric Co., Philadelphia, for part of his 14 years in this business; Miss Charge and Miss Sepanek are stenographers and "wizards" at filling out priority forms; C. H. Donovan, order department customer contact man.

Above is C. H. Donovan, order department, whose open catalog file forms a prophetic "V."

In photo on right, is Joseph Yates, left, warehouse manager with 18 years experience. Joseph and George Pesh, center and right, are order selectors.



There will be FEWER OF THESE

Eyeglasses symbolize eyestrain. By reducing eyestrain through proper lighting, your war production can be increased both in quantity and quality. Fewer man-hours will be lost, fewer rejects will come off your production lines.

Silv-A-King offers a complete lighting service—fine equipment (either fluorescent or incandescent) plus skillful engineering to lay out your lighting installation for maximum effectiveness. Our ability to serve you well in lighting comes from 21 years of experience as industrial lighting specialists. A Silv-A-King lighting engineer is at your call wherever you are located.

Bright Light Reflector Company, Inc.,
1031 Metropolitan Avenue, Brooklyn, N. Y.

Write for new, 16-page Silv-A-King book:
"Light Is An Essential Production Tool"

A Few Typical Silv-A-King Users:
AC SPARK PLUG
GENERAL MOTORS
FISHER BODY
INTERNATIONAL HARVESTER
JONES & LAUGHLIN STEEL
PITTSBURGH PLATE GLASS
and many others

FLUORESCENT · INCANDESCENT
SILV-A-KING
EQUIPMENT

SILV-A-KING MAKES *Light* WORK FOR YOU

ELECTRICAL WHOLESALERS UNDER THE MICROSCOPE

(Continued from page 47)

ice, cars for salesmen and facilities for storing and servicing automotive equipment.

Economical Methods and Policies Devised and Adopted

A review of methods successfully adopted by electrical wholesalers in giving more satisfactory and effective service to customers at a reduced cost includes the following:

1. Control of free servicing expenses on defective merchandise within limits compensated for by the manufacturer (guaranty period). Avoidance of waste in sales promotion material.

2. Specialized sales expense only where it is warranted by volume and margin rate.

3. Elimination of uneconomical coverage of territory.

4. Avoidance of too extensive free delivery zones.

5. Avoidance of abnormal bad account losses by not making too liberal extension of credit.

6. Avoidance of markdown losses and attainment of better merchandise turnover by prompt disposition of obsolete and inactive items and control of current buying.

7. Enforced restrictions on returns. Control salesmen's overselling which results in "sales policy" returns.

8. Reduction in the total expense of handling small orders under $5 (35 percent of total number and only three percent of total sales value) both by reducing the number of such and the expense of handling each small order which has to be filled as a necessary accommodation to customers. In many cases too large discounts had been granted on such sales to casual customers. The excessive expense of small orders has been remedied in several ways.

8.1 Persuading the customer, large or small, that an unnecessary number of orders is just as uneconomical for him as for the electrical wholesaler, since it involves his placing an unnecessarily large number of orders, receiving and checking the numerous shipments and invoices, and vouchering them for

payment. Realization of this fact will lead the customer to accumulate his buying orders and to avoid splitting down his orders among competitors too much, based on small differentials in price.

8.2 Routines for handling small orders as a class have been simplified through omission of certain operations. They were treated as an unclassified group in all accounting and statistical operations and records, and costed as a group at an estimated gross margin percent.

8.3 The wholesaler has avoided the shipment of small quantities as back orders by carrying adequate stocks of standard items that are in demand from his customers. This was sometimes not done because his merchandise investment was overloaded with the residue of obsolete and inactive items piled up over a period of years. If these items are cleared currently before inventory each year, he not only has a smaller ultimate loss but can afford to buy at favorable quantity discounts and carry adequate quantities of items which he should have in stock. By properly informing his salesmen, so that they can feature and offer for sale items which he stocks, the wholesaler has avoided having to order a carton of 50 to fill an order for seven of an odd item for which the salesman could have persuaded a customer to order an acceptable substitute which was already in stock.

8.4 In place of the minimum charge on small orders which raises specific resistance, particularly from large customers who see that they are paying in excess of a reasonable price for the particular item involved, a 10 percent "service" or "delivery" charge has been made common practice on small orders, which were previously delivered free, at least in the case of casual customers and small accounts.

8.5 The size of the average order from customers has been increased by setting the quantity or dollar value and discount brackets at points which are economical and practical for customers. This applies particularly to commodities of low unit values, such as wiring devices, fuses, outlet boxes, fittings, low priced clocks and heating devices.

9. Economies by adoption of me-

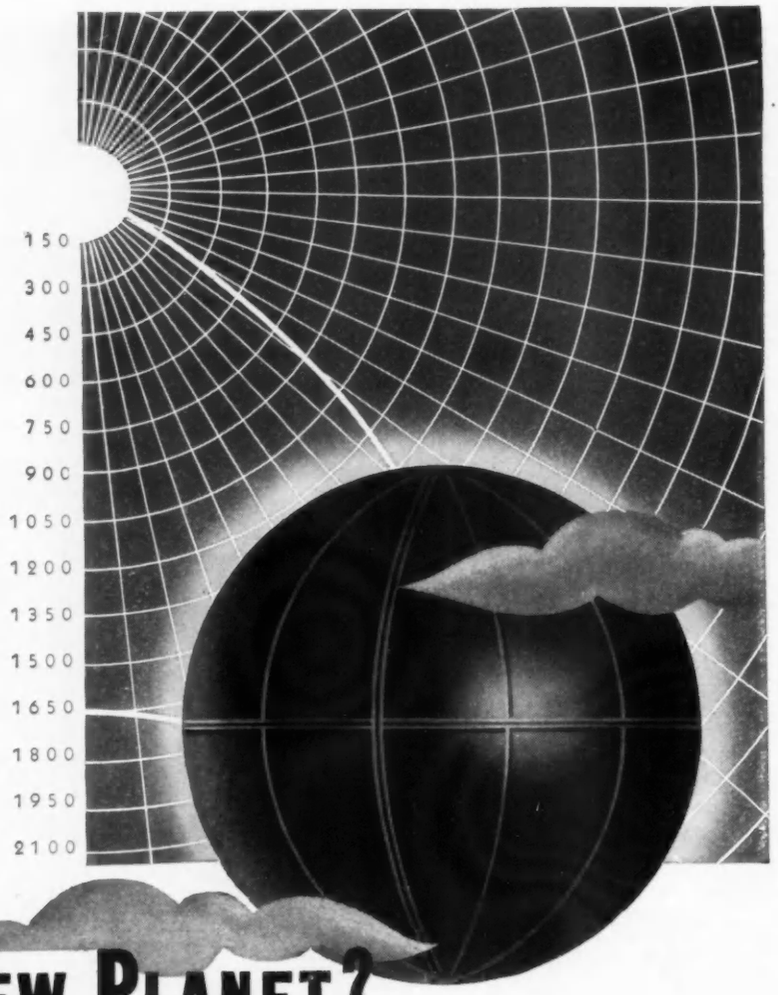
PROPER WIRING
For Lighting Heavy Equipment

SAVES POWER, COPPER, STEEL and CUTS INSTALLATION TIME

Savings and safety, two present-day musts, can be achieved by the proper wiring of heavy equipment.

Lighting Transformers, used on individual machines to step down the 230 or 460 volt power circuit to 115 volts for lighting, can eliminate the need for running the 115 volt circuit from the ceiling. The important economies of this single-circuit system are the saving of scarce copper wire and steel conduit, the conserving of valuable power and the cutting of installation time. Also important is the safety factor of lower voltage in open sockets and the use of but one type of bulb of standard size.

CHICAGO TRANSFORMER CORPORATION
3501 WEST ADDISON STREET • CHICAGO



NEW PLANET?

NO. But new worlds of information are charted in this huge spherical photometer, which is one of the instruments used in the Goodrich laboratory for the measure of light in its manifold applications to industry.

Here at Goodrich, all interests converge on this one objective—*improvements in industrial illumination* through the development of fixtures to meet every kind of task and insure the clear, comfortable vision that means better work, done faster.

This modern laboratory, equipped with the most advanced scientific instruments, has given industry many notable achievements in lighting. Among recent developments is the new Goodrich Highlite Reflector, which delivers abundant illumination for large interiors without shadow or glare. It is but one of many hundreds of styles and sizes of Goodrich porcelain enameled lighting fixtures. Literature on request.

GOODRICH RLM

Protecting vital plants with floodlighting—saving man-hours in production—Goodrich industrial fixtures are serving America's war effort everywhere.

Goodrich Highlite Reflector

LIGHTING FOR INDUSTRY

GOODRICH

ELECTRIC COMPANY

OFFICES IN ALL PRINCIPAL CITIES

GENERAL OFFICES AND FACTORY: 4610 BELLE PLAINE AVENUE, CHICAGO, ILL.

SOLD ONLY THROUGH ELECTRICAL WHOLESALERS

chanical bookkeeping methods, statisical tabulation by "peg-board" methods, card-slotting devices, and so on.

Control of Expenses Through Budgeting

In some cases controllable expenses have been effectively "controlled" not through a fixed expense budget in dollars monthly for the year (since budgeted sales and income may not be realized) but through budgeted operating ratios that help keep these expenses in proper relation to any fluctuations in operating income or by budgeted expenses per transaction. Percentages to sales on various expense items are misleading because of varying percentages of operating income to sales and the fluctuating sales value per transaction.

Economic Progress Shown by Census Figures—1929-1939

In bringing this quicker and more convenient service to the customer, the electrical wholesaler in 1939 operated with 3,072 separate establishments located in a much larger number of cities than were the 2,182 establishments in 1929. He performed this expanded service at an expense of only $130,660,000 in 1939 against $143,083,000 in 1929, with a somewhat smaller volume of sales and gross margin available to cover expenses in 1939. In performing this more convenient and available, but still more economical, service for his customers, the wholesaler had to contend with the fact that the volume of sales per establishment had been reduced from nearly $400,000 to approximately $250,000 *per establishment*. Furthermore, it took 37,821 employees to man the expanded number of service establishments in 1939 compared with only 34,854 employees in 1929, but through savings and economies, the total expenses of performing this service were reduced by over $12,400,000.

In spite of a larger number of merchandise stocks, distributed in 40 percent more locations, the electrical wholesaler between 1929 and 1939 improved the rate of turnover of his merchandise investment by sales from 8.8 times to 9.4 times, thus decreasing the relative cost of carrying this merchandise invest-

ment expressed as a percent expense to sales.

The variations in sales volume and percent expense to sales for the various classes of wholesalers are shown in Table A on page 46.

Radio and Refrigerator Distribution

In 1929 the specialized radio distributors were able to operate at a relatively low percent expense to sales because of the large volume of sales done by them (averaging nearly $500,000 per establishment). By 1933 the depression had put over one-third of them out of business and the survivors averaged less than $100,000 sales per establishment with a consequent increase in percent expense to sales, proportionately much greater than that of general line wholesalers. In the meantime a new type of specialty appliance distributor specializing in refrigeration had come into the picture, who by 1935 accounted for a very large portion of the electrical wholesaling business.

During the pioneering stages of both radio and refrigeration, the development of the sales volume with new customers involved necessarily large expenditures for advertising, sales promotion and display. In 1935, for instance, the selling expenses of specialty appliance distributors (including radio) as a group were 9.4 percent of sales compared with 4.9 percent for general line and other types of electrical wholesalers.

By 1939 the marketing of radio and refrigeration as one of many other appliance lines bought by the domestic consumer through general merchandising channels allowed much of this business to flow through general line wholesalers who had set themselves up to meet the special requirements of this business on an economical basis, since its seasonal peaks could be balanced with other seasonal peaks to get an even flow of business throughout the year. They were therefore able to handle the business at a lower expense percent to sales as indicated by the Table A.

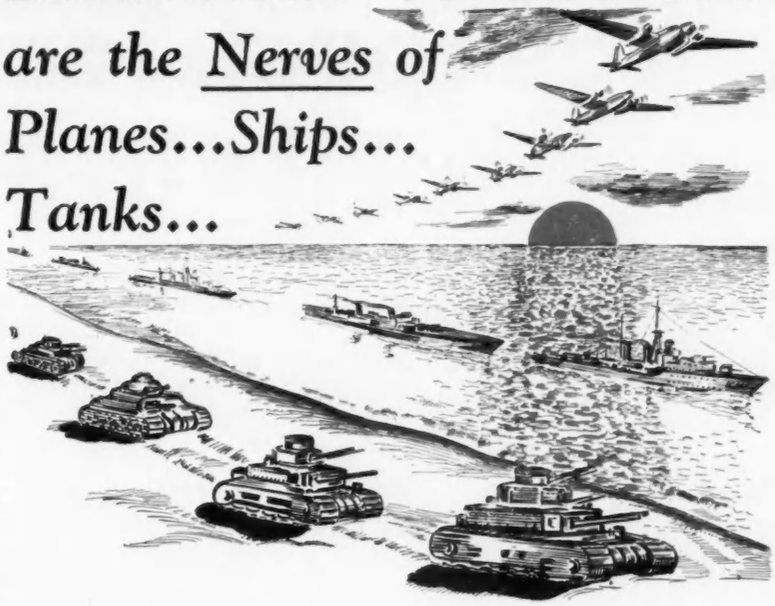
The breadth of coverage and service of electrical wholesalers according to the latest Census figures (1939) is shown in Table B.

The extent to which the electrical wholesaler has been able to serve

RUBBER COVERED POWER CABLES • BUILDING WIRE

ELECTRICAL CONDUCTORS

are the Nerves of Planes...Ships... Tanks...



and CRESCENT INSULATED WIRE & CABLE CO. is doing its part in furnishing a vast quantity of electrical wires and cables that carry the power from battery or generator to delicate parts that control these instruments of destruction. Telephones, radios, lights, signals, starters and instrument control are all dependent on electrical conductors that *must not fail.*

CRESCENT has had over fifty years experience in the manufacture of ALL types of Electrical Wires and Cables.

100% War Production

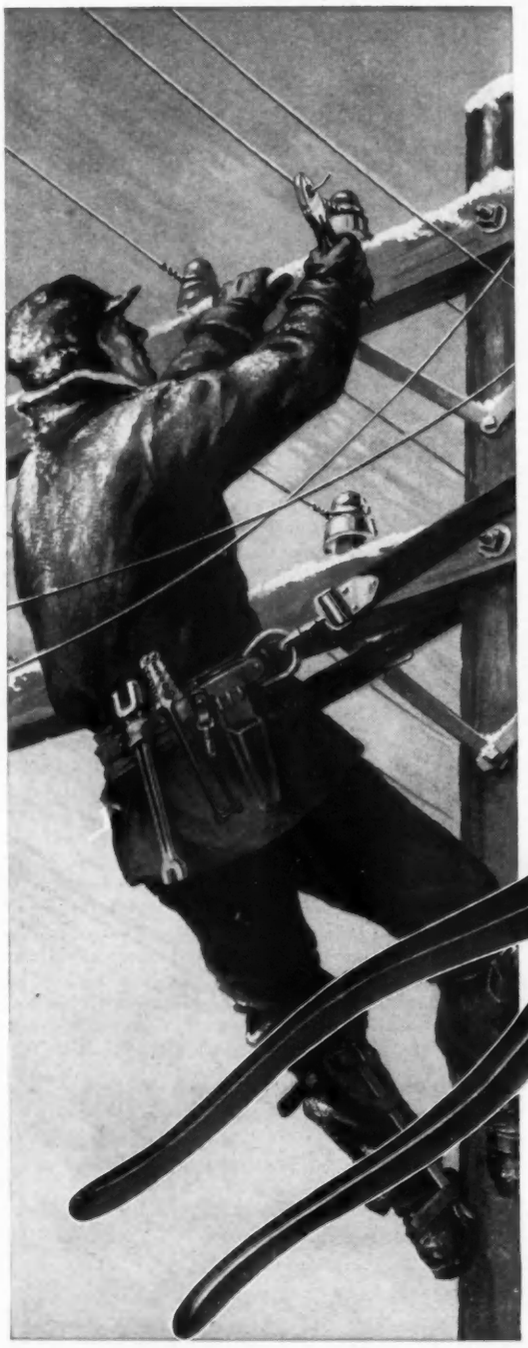
CRESCENT INSULATED WIRE & CABLE CO.

CRESCENT
WIRE and CABLE
Factory: TRENTON, N. J.—*Stocks in Principal Cities*

JOBBER CO-OPERATION—A PERMANENT POLICY
CRESCENT ENDURITE SUPER-AGING INSULATION

VARNISHED CAMBRIC • FLEXIBLE CORDS • LEAD ENCASED AND PARKWAY CABLES • ARMORED CABLE
CRESFLEX NON-METALLIC SHEATHED CABLE • SERVICE ENTRANCE CABLE • MAGNET WIRE • BARE WIRE

A STURDY TOOL FOR TOUGH JOBS —KLEINS!



War-time emergency means messages must go through. Power service cannot be interrupted either if vital war industries are to produce to capacity. There's no time to wait for skies to clear or the mercury to rise —no matter how tough the job. The man on the pole who keeps the lines open knows the tools he uses have to be tough, too. That's why you will find the Klein name on his pliers and wrenches, on his safety strap and belt. He knows it stands for equipment that he can rely on.

Your copy of the Klein Pocket Tool Guide will be sent on request

ASK YOUR SUPPLIER

Foreign Distributor:

International Standard Electric Corp., New York

Mathias KLEIN & Sons

Established 1857 — Chicago, Ill., U.S.A.

3200 BELMONT AVENUE, CHICAGO

this wide range of customers at a decreasing rate of expense to them over this period (without too great a rate of expense even in a year like 1933, when sales volume was less than one-third of 1929), is illustrated by the chart on page 47. On this chart the percent expense to sales is plotted on an inverted scale to show the correlation of expense rate to varying sales volumes. In relation to volume, the performance in 1939 compared with 1929 was at a relatively more economical expense rate (16.6 percent to sales compared to 16.9 percent) in spite of a greater variety of services performed particularly in the specialty appliance business, and, as stated above, with 40 percent more establishments, which had to be operated on 7 percent less sales volume. All of these functions had to be performed at a lower expense per transaction to keep within the diminishing gross margin per transaction, which was due not only to lower unit sales values of radios, refrigerators, lamps, and the like, but also to a diminishing gross margin rate in the period 1929–1939.

Effectiveness of Electrical Wholesalers' Services on War Orders

The urgent need of speedy and complete delivery of critical materials on War orders has been successfully met by the electrical wholesaler with his specialized service organization and adequate stocks. The useful functions of the electrical wholesaler which were recognized during the World War 1914–1918 by an appropriate priority rating have been utilized to an even greater extent in the present emergency.

Economy and Speed of Service— Wholesaler vs. Manufacturer

The question, sometimes raised as to whether the wholesaler performs these functions more economically and at as low a cost to the ultimate buyer as the manufacturer could, was recently answered by a prominent independent manufacturer as follows:

"Forty years of experience has convinced us that, in this type of business at least, wholesaler's distribution reduces the manufacturer's distribution and selling cost and therefore reduces the selling price of electrical supply material to the

user. In support of this contention, let us present the following:

"To answer all the various government department inquiries and to execute all the bids alone, in addition to all private inquiries, would require us to increase our staff many fold.

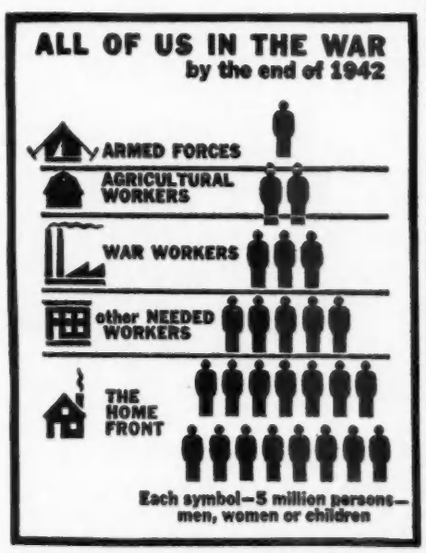
"To handle orders from thousands of sources, mostly in small quantities, would require a tremendous expansion of our order, service and filing departments.

"To handle thousands of accounts and billings would cause an enormous increase in our credit, accounting and auditing departments.

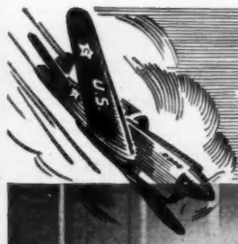
"To follow claims, engineering and installation problems of thousands of users, would require us to greatly expand our field force.

"At present these functions are smoothly and ably performed by a strategically located group of distributors, who can handle them much more efficiently and economically than we could, and without adding as much to the cost of our product, largely because they maintain complete service organizations for the purpose and spread the cost over the products of other electrical manufacturers, as well as ours. Thus, they eliminate the duplication of these costs to all such manufacturers."

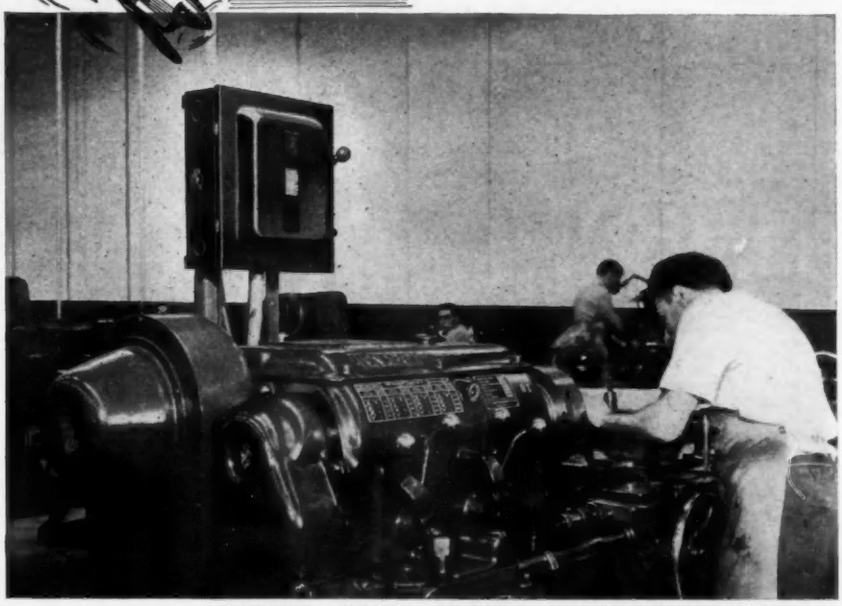
★ ★ ★



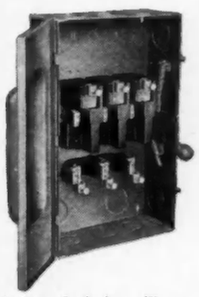
The above chart is one prepared by the Division of Information, Office for Emergency Management.



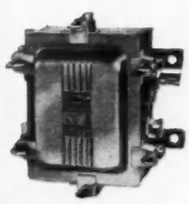
TO DO THE JOB BETTER...



MORE AND MORE MANUFACTURERS USE Federal SWITCHES ON JOBS LIKE THIS*



Safety Switches Type "A", "C & "D" 30 to 1200 amperes Single and Double Throw



Weatherproof — Dust-tight Switches 30 to 1200 amperes

Complete line of circuit breakers and fusible panelboards

All over the country wherever the pressure's on . . . wherever plants are going full blast twenty-four hours a day, seven days a week . . . wherever the job must be done better and faster . .. you're sure to find Federal safety switches, panelboards, switchboards and circuit breakers at work.

That's so because the men who know—the men who supply and install electrical equipment—the electrical wholesalers and contractors with difficult war jobs to tackle . . . industrial conversions . . . army camp and industrial installations . . . defense housing projects—have come to depend on Federal. They know that Federal representatives located in principal cities are always at their service offering expert help — quickly. And they've found Federal electric products offer many exclusive advantages. You will, too — when you switch to Federal to help do the job better and faster.

*This photograph was taken in the plant of a large manufacturer of airplane parts. For obvious reasons the name of the manufacturer cannot be divulged.

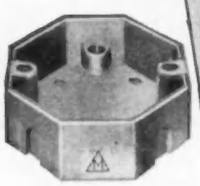
FEDERAL ELECTRIC PRODUCTS COMPANY
52 PARIS STREET, NEWARK, N. J.
PANELBOARDS • SWITCHBOARDS • SAFETY SWITCHES • CIRCUIT BREAKERS

ILLINOIS

Completely Insulated

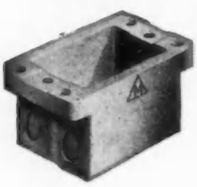
ALL PORCELAIN WIRING SYSTEMS

for HOME, COMMERCIAL AND INDUSTRIAL WIRING *Conserve* STEEL, ZINC, COPPER, RUBBER



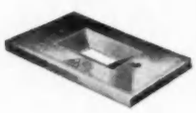
OUTLET BOXES

Glazed and unglazed styles conforming to all existing standards of dimensions, spacing, position of knock-out holes and mounting screws. High mechanical and electrical efficiency.



SWITCH BOXES

Insure greater safety in wiring and the elimination of all grounding hazards. Made of best quality white porcelain. Metal inserts are placed in two holes of the switch boxes for receiving screws of standard switches, plugs, outlets, etc. Knockouts for single wires, also for cables. Specify and use them.



STANDARD TUBES

In sizes ½ to 48 inches, 5/16- to 3-inch diameter in following types: unglazed, glazed, split, floor, split floor, headless, curved end, cross-over split, and cross-over. Diameters all uniform both inside and outside.

KNOBS

Cement coated — nail — genuine leather-washer — code standard. They don't chip when driven in and they stay in place.

TOGGLE SWITCH PLATE

All porcelain with beveled edge and decorative pattern on face.

CLEATS

Standard one, two, and three-wire types.

● Not only because porcelain saves vital materials is it valuable today but because these systems give you highest standards in results and offer your customers permanent wiring. Porcelain systems are safe, easy to install, and adaptable to practically all wiring plans and layouts. Grounding is unnecessary. No rusting or corrosion. Install ILLINOIS All Porcelain Wiring Systems the next time you have a wiring job.

TRADE MARK Bull Dog REGISTERED

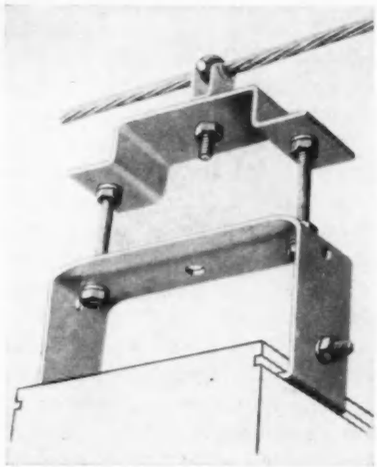
Look for this Trade Mark

ILLINOIS ELECTRIC PORCELAIN CO.

MACOMB, ILLINOIS

New Products You Can Sell

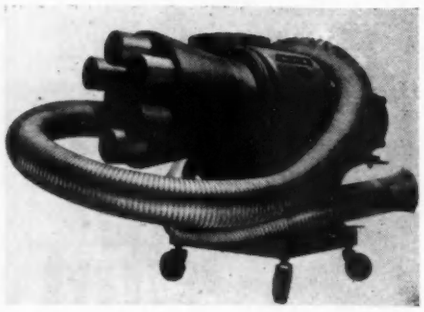
FLUORESCENT FIXTURE



Continuous-row industrial fluorescent fixture comes equipped with "Slide-Grip" hangers. This device offers a variety of applications for chain, surface, rod or messenger-cable mounting. Units are available for either 110-125 volt or 220-250 volt 60 cycles a.c. operation. Sylvania Electric Products, Inc., Ipswich, Mass.

When writing mention WHOLESALER'S SALESMAN

EXHAUSTER AND VENTILATOR

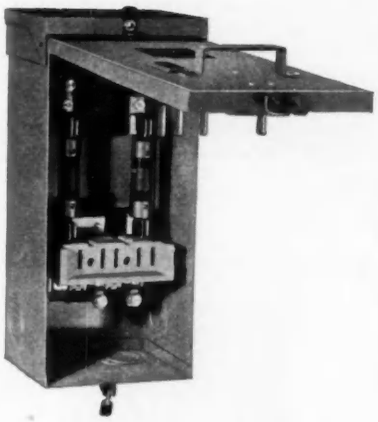


The "Octopus" exhauster and ventilator, suitable for use in ship holds, mines, sewers, tunnels and welding departments, may be placed or hung in any convenient place between the working area and the open air. May be connected by

means of flexible metal hoses to the area to be ventilated. Exhauster may be converted into a fresh air ventilator. Chelsea Fan & Blower Co., Irvington, N. J.

When writing mention WHOLESALER'S SALESMAN

MARINE SWITCHES



Marine switches are available for either 2 pole, 250 volts d.c. or 3 pole, 575 volt a.c., services with capacities ranging from 30 to 100 amperes. Switch blade hinge jams have been eliminated to conserve copper. Special barrier arrangement are intended to prevent fuses from vibrating out of contact due to gunfire or shock. Square D Co., Detroit, Mich.

When writing mention WHOLESALER'S SALESMAN

FLOODLIGHT

L-68 floodlight offers a choice of a chromium-plated reflector for narrow beam widths, a painted steel reflector for wider beam widths, an internal silvered glass reflector. Unit is applicable for all types of floodlighting problems. Cast iron is used for socket housing. Door glass is available in plain or stippled convex heat-resisting glass. Floodlight may be operated as an open-type unit. Accommodates 750, 1000, 1500-watt general-service lamps. General Electric Co., Schenectady, N. Y.

When writing mention WHOLESALER'S SALESMAN

LATROBE

FULLMAN MANUFACTURING CO. QUALITY AT LATROBE SUPREMACY LATROBE, PA.

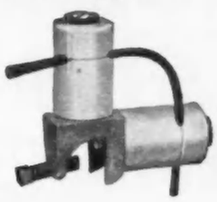
FLOOR BOXES *and* WIRING SPECIALTIES

Flexible as to Use, Long Lasting, Economical

Flexibility as to use and ease of installation grow in importance with the increasing tempo of war production. The ability to stand up under sustained heavy service is equally important. Sound reasons for the rising demand for Fullman Latrobe Products. The line includes approved types for commercial, industrial and residential jobs.

"Bull Dog" Insulator Supports

Two No. 5½ Split Insulators attached to No. 400 "Bull Dog" Insulator Support with 2" No. 10-24 Machine Screws. Made in four sizes to accommodate all standard porcelain or glass insulators.

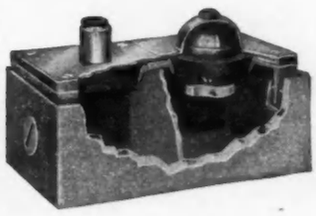


No. 284 Receptacle Nozzle

One of many "Latrobe" type nozzles for watertight floor outlets. No. 284 is a double duplex nozzle. Very neat and compact. ½" brass pipe extension. Or if required, ¾" pipe extension.

No. 252-R Two Gang Box

Two Gang Adjustable Floor Box with No. 208 receptacle in one section. One cover plate with ½" flush brass plug and the other cover with 2" flush brass plug.



No. 130 Adjustable Water Tight Floor Box

No. 130 Box with No. 207 Bell Nozzle. Cut-away view illustrates how tapered unit receptacle fits tapered opening in adjustable ring. Cover plate 3½" — overall height 3½".

Keystone Fish Wire

One of the most popular brands in the country. Finest grade flat steel wire. Ten sizes ranging for the lightest work up to the heaviest power wiring. 100, 150 and 200 foot coils in strong cartons.

Pipe or Conduit Hanger

Pipe support turns freely, allowing pipe to run parallel or at right angles to beam. Does away with drilling or use of straps. Handles ½", ¾" and 1" pipe to steel beams ⅜" thick.

Check your stock today and let us know your requirements. We will make every effort to ship when wanted.

FULLMAN MANUFACTURING CO.
LATROBE . . . PENNSYLVANIA

When you sell
QUAD
LIGHTING UNITS
BEARING THE
RLM LABEL
YOU SELL CUSTOMER
Satisfaction
QUAD

QUADRANGLE 500 WATT RLM

● QUAD Units all have correct basic design and construction features. The RLM Label on QUAD Lighting Units assures your customers of modern, correct, and high quality commercial and industrial lighting. It's the line that will be popular tomorrow as well as today.

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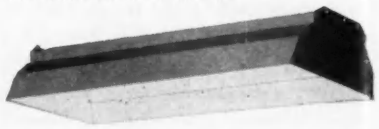
RLM THREADED
DOME REFLECTOR

QUADRANGLE MFG. COMPANY
Mfgrs. of Incandescent and Fluorescent Lighting Equipment
32 SO. PEORIA ST. CHICAGO, ILL.

FLUORESCENT FIXTURE



Fluorescent lighting fixtures, employing what is claimed to be a new method of ballasting, are now available for industrial plant lighting applications. They are suitable for continuous or separate units, for close to ceiling or suspended mounting, open reflector or louvered models. R & W Wiley, Inc., 777 Hertel Ave., Buffalo, N. Y.

When writing mention WHOLESALER'S SALESMAN

SOLENOID COUNTER

Namco Solenoid Counter Type 16 RA-1, for a.c. only, insures positive action for each energization. It is claimed to be built to withstand heavy duty machine tool usage and designed for installation with minimum electrical connections. The National Acme Co., Cleveland, Ohio.

When writing mention WHOLESALER'S SALESMAN

TRAFFIC SIGNAL SWITCH

Control switch, designed to permit satisfactory "dim-out" operation of traffic signals during a blackout, consists of a transformer and single-pole switch with two positions. At "normal" position the signal lamp burns at full brilliancy. At "blackout" position, voltage is reduced and the lamp filament just glows. A visor must be provided to screen the upward light and decreases the range of signal beam. General Electric Co., Schenectady, N. Y.

When writing mention WHOLESALER'S SALESMAN

News

(*Continued from p.* 28)

Co., New York, W. D. Steele, president, Benjamin Electric Manufacturing, Des Plaines, Ill., Henry D. Young, president, Delta-Star Electric Co., Chicago, Ill.

Invited to the luncheon along with NEMA representatives and their guests were the leaders of the utilities in the New York area.

Prior to the annual meeting, an announcement from the McGraw Award Committee of Judges stated that the McGraw Award for the Manufacturers Medal would not be made.

Following the luncheon, the Policies Committee was scheduled to meet to consider the NEMA in Wartime program, the NEMA Budget for 1943, election of Governors and other matters.

The NEMA annual meeting, of which the above luncheon was to be the feature had scheduled some 125 meetings of major committees sections and groups.

Chamberlain New S.M. At Jenkins Bros.

Charles C. Chamberlain has been named as general sales manager of Jenkins Bros., Bridgeport, Conn.,

manufacturers of tape, valves and other products. Farnham Yardley, president of the company, made the announcement following a meeting of the board of directors.

Mr. Chamberlain has been publicity manager of Jenkins Bros. since 1940. He came to the company in 1929 following his graduation from Hamilton College. Starting as an assistant in

Photograph actual size

BIG LUGS

and

LITTLE LUGS

Photograph actual size

and

MANY SIZES IN BETWEEN

PLACE YOUR ORDER NOW FOR WOLVERINE COPPER SOLDERING LUGS AND SPLICING SLEEVES.

You can always depend on Wolverine lugs and sleeves. Backed by the 75-year experience and the resources of Calumet and Hecla, Wolverine quality is now controlled right from ore straight through to finished product.

Prompt shipment on orders rated A-1 or better.

WOLVERINE TUBE DIVISION
OF CALUMET AND HECLA CONSOLIDATED COPPER COMPANY
Seamless COPPER • BRASS
1425 CENTRAL AVENUE • DETROIT, MICHIGAN

P&S
WIRING DEVICES
The P&S-Despard Line
MADE TO ORDER for TODAY'S MARKET
★ ★ ★ ★ ★

T-Rated Switches—Double Finger Grip Outlets—Pilots—Plates
Small size conserves critical raw materials and conserves shipping space—Compact combinations eliminate multi-gang boxes and plates—no lost time waiting for factory assembled combinations—Make your own right on the job.
IMMEDIATE DELIVERY ON RATED ORDERS
Send for Wiring Device Catalog
Pass & Seymour, Inc.
SYRACUSE, N. Y.

the advertising department, he became advertising manager in 1932, was advanced to publicity manager in 1940.

As general sales manager he will make his headquarters at the general sales offices of the company, 80 White St., New York, N. Y.

E. A. Nickel Appointed Mitchell Sales Manager

Mr. B. A. Mitchell, president of Mitchell Manufacturing Co., Chicago manufacturers of lighting equipment, has announced the advancement of Edwin A. Nickel to the position of Sales Manager. Mr. Nickel's duties had been confined previously to advertising and sales promotion, which he will continue to supervise in addition to his new responsibility as sales manager.

Direction of sales for Mitchell Manufacturing had until now been held by Mr. Mitchell. In relinquishing this post, Mr. Mitchell stated that the ever increasing demands of wartime operation, with new and increased problems of production, product planning and travel, forced him to devote his entire time to his position as president.

Edwin A. Nickel

Mr. Nickel has had 23 years experience in all phases of sales work.

Standard for Cutouts Changed by NEMA

The NEMA standard for distribution cutouts has been changed at the request of WPB in order to reduce the amount of copper being used. Under the new standard, the overall length of universal fuse links (0 to 15kv) for distribution cutouts has been changed from 23 to 20 inches (minimum).

GREATER PROFITS

with
WARE HI-LAG
Strong Time-Lag
2 TO 5 TIMES
Normal Current
INCREASED PROTECTION
End Needless Fuse Blowing
Certified to Comply—
Federal Specification
WF-803a, Type II
•
APPROVED BY UNDERWRITERS
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Write for Details
Mfgr's Agents Territory Open
WARE BROTHERS
4420 W. Lake St., Chicago

TORK

TORK CLOCK
TURN ANYTHING ELECTRICAL ON & OFF REGULARLY

"FRIGID"
VENTILATING EQUIPMENT
Circulators, Exhaust Fans, Blowers, Attic and Industrial Fans, Spray Booth Fans, Shutters
FOR THE DURATION WE CAN ACCEPT PRIORITY ORDERS ONLY
Circulators and Devices Manufacturing Corp.
100 Prince St. New York, N. Y.

Wetherbie is New GE N.Y. Wiring Manager

Mr. J. H. Crawford, manager of sales, GE construction materials division at Bridgeport, has announced the appointment of J. O. Wetherbie as manager of General Electric wiring materials district No. 2 with headquarters at 570 Lexington Ave., New York, N. Y.

This new assignment is in addition to Mr. Wetherbie's present responsibility as special representative coordinating the activities of General Elec-

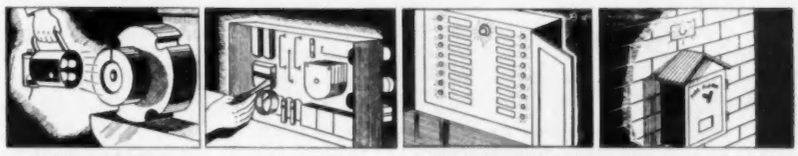
J. O. Wetherbie

tric's appliance and merchandise department and other departments of the company on large governmental, commercial, industrial and residential construction projects. On his new assignment he will have charge of General Electric wiring materials sales along the Atlantic seaboard from New York City to Charlotte, N. C.

Mr. Wetherbie was manager of the General Electric exhibit at the World's Fair in New York City in 1939 and 1940. For ten years prior to that he was eastern manager of General Electric building equipment sales with headquarters in New York.

WPB Revises P-46 Order

A revision of Priorities Order P-46 providing higher ratings with which to obtain necessary materials for utility maintenance and repair has been issued by WPB and is now in effect. However, the revised order tightens up WPB controls over the permitted volume of materials which may be used and the amount of inventory, and also,



MOTOR SPEED TESTS TEST LIGHTS PANELBOARD INDICATORS FIRE ALARM STATIONS

WAR PLANTS NEED G-E NEON GLOW LAMPS IN SCORES OF VITAL PLACES!

ALL war plants you call on can use G-E Neon Glow lamps in scores of vital places . . . as test lamps for electrical circuits, for synchronizing any two or more moving machines and checking speed, as indicators for fuses and for machines with small quiet motor which may run unnoticed, and as pilot lights to show location of switches, sprinkler valves, alarm boxes, and emergency doors and exits.

Available in many sizes, they are not ordinarily affected by shock, vibration, or voltage variations. With a useful life of about 3000 hours, they can operate on standard voltage on A.C. or D.C. (and also on standby battery or generator service).

For full information, write the address below.

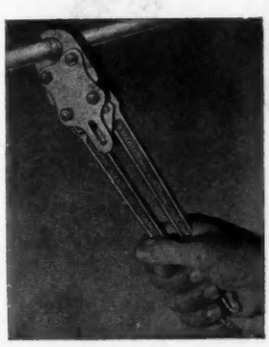
S-14
3, 2½, 2, watts

NELA SPECIALTY DIVISION, LAMP DEPT.
GENERAL ELECTRIC
410 Eighth Street, Hoboken, N. J.

What a DIFFERENCE!

And there's just as much difference between the *streamlined* BRIEGEL METHOD of making conduit connections and former, old-fashioned methods!

Take a look at the picture below: two squeezes with the patented B-M "indenter" (which costs only $1.25) and you have a smooth, efficient job when you use B-M connectors and couplings. No extra turns or twists—no nuts to tighten!



The BRIEGEL METHOD saves you up to 50% on time and a substantial materials-saving (in keeping with today's thinking). Means more profit, too! Approved by Underwriters' Laboratory, of course.

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Jersey City, N. J.
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Youngstown, Ohio
Enameled Metals
Pittsburgh, Pa.
National Enameling & Mfg. Co.
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Triangle Conduit & Cable Co.
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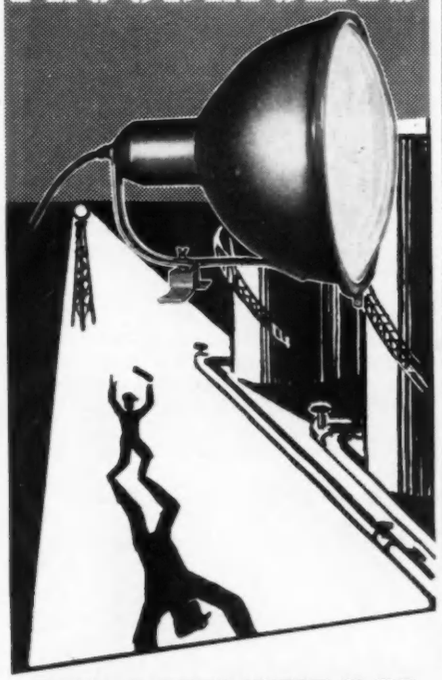
BRIEGEL METHOD TOOL CO., Galva, Ill.

YOU CAN *Sell* COMPCO FLOODLIGHTS



PROTECTION FOR PRODUCTION

It takes more than fences and plant police to keep out saboteurs. It takes Compco Floodlights to bring out the hidden dangers that lurk in darkness. These powerful luminaires stop saboteurs from getting in...or make it mighty tough for them to swing into action if they do get in.

Here's an item you can really sell—*in quantity* ...and *get them—on time!*

Full up and down adjustment in any radius at any point.

ANOTHER *Compco* QUALITY PRODUCT

Other Compco products, well known for their high quality, endurance during service and plus-value include fluorescent lighting fixtures, incandescent lighting fixtures and indoor floodlights for industrial and commercial use.

Available for better floodlighting with a baked-on white "plastic enamel" reflector and baked-on industrial grey outside finish. Three sizes. *Write or wire for specification sheet and prices.*

COMMERCIAL METAL PRODUCTS CO.
2251 W. St. Paul Ave., Chicago, Ill.
Phone Armitage 1123

indirectly, the amount of material that may be purchased from suppliers.

The new order's rating is now AA-5, which is higher than the A-2 and A-5 basic ratings previously effective but is the lowest of the new double-A series of priority ratings.

Revision of Paragraph F limits withdrawals and inventories of transmission and distribution supplies to 60 percent of the 1940 base, and requires that not less than 75 percent of the permitted amount of these materials be obtained from the inventories of other utilities. This revision has the effect of reducing to 15 percent of the 1940 base the amount of material that utilities may purchase from outside sources.

PHOTOLAMP EXPERT, Don J. Mohler, top, and Robert W. Morris, photolamp engineer, above, have been transferred from GE's Nela Park to the Pacific Coast and Washington, D. C., respectively. Mr. Mohler will head GE photolamp activities in the Rocky Mountain and Pacific divisions, with headquarters in Los Angeles. Mr. Morris will work on special lighting problems for a branch of the U. S. Navy.

MORE FACTS ON PRODUCTS

Air Circulators—Literature containing specifications, illustrations and list prices, can be obtained from Circulators and Devices Mfg. Corp., New York City, describing the company's oscillating circulators, steel blowers, Circo automatic shutters, other ventilating equipment.

Control Equipment—Thirty-six page Bulletin, No. 67, issued by Frank Adam Electric Co., St. Louis, Mo., lists Standardized, Lighting and Appliance, Branch Circuit Breaker, Dublbrak Circuit Breaker, Fuse Only, Switch and Fuse panelboards.

Control Equipment—Available upon request from the Square D Company, Detroit, Mich., is Bulletin 1000, covering Service Equipment and Meter Entrance Switches accompanied by illustrations and specifications. Bulletin 4000, also available, includes applications, listings, and circuit diagrams of this company's Multi-Breakers.

Electrical Equipment—Copies of the new Cotalog, a quick reference listing of the electrical products made by Colt's Patent Fire Arms Mfg. Co., Hartford, Conn., is available upon request. Included are complete listings of type A, C & D safety switches and industrial control equipment.

Electrical Equipment—New Catalog and Wiring Guide, No. 16, published by Wiremold Company, Hartford, Conn., emphasizes the many important war-time industrial applications of this company's products, describes two new receptacles, contains detailed instructions and information on the installation of Wiremold's raceways and fittings and fluorescent lighting equipment.

Flourescent Fixtures—Bulletin F-62 covers new V-Series "Lite-Way" and recessed troffer type fixtures with nonmetallic parts, as manufactured by DayBrite Lighting, Inc., St. Louis, Mo.

Panel Instruments—Roller-Smith Company, Bethlehem, Pa., recently published a 12-page catalog, No. 4120, describing the company's line of 3 in. and 4 in. panel instruments. Illustrates various types of cases, gives complete listing and prices, and shows dimensions and mounting details on standard panel instruments.

Wire and Cable—General Cable Corporation of New York City has available a copy of the latest data sheet covering Bus Drop Cable types SNG, SNM, and RM, and includes table of diameters and weights.

NALCO

Infra-Red Ray
LAMPS
For Radiant Energy —Baking And Drying

Meet industry's demands for radiant energy-heating and drying by featuring Nalco Dritherm Carbon Filament Lamps. Available in Inside-Silvered finish (no reflectors required) or in Clear Glass style.

Write for prices and discounts

NORTH AMERICAN ELECTRIC LAMP COMPANY
1034 Tyler Street St. Louis, Missouri

LEGAL NOTICE

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of Wholesaler's Salesman, published monthly at Albany, N. Y., for October 1, 1942.

State of New York } ss.
County of New York }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared J. A. Gerardi, who, having been duly sworn according to law, deposes and says that he is the Secretary of the McGraw-Hill Publishing Company, Inc., publishers of Wholesaler's Salesman, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, McGraw-Hill Publishing Company, Inc., 330 West 42nd St., N. Y. C. Editor, O. Fred. Rost, 330 West 42nd St., N. Y. C. Managing Editor, A. B. Conklin, Jr., 330 West 42nd St., N. Y. C. Business Manager, O. Fred. Rost, 330 West 42nd St., N. Y. C.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder, the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) McGraw-Hill Publishing Company, Inc., 330 West 42nd St., N. Y. C. Stockholders of which are: James H. McGraw, 330 West 42nd St., N. Y. C. James H. McGraw, Jr., 330 West 42nd St., N. Y. C. James H. McGraw, James H. McGraw, Jr., and Curtis W. McGraw, Trustees for: Harold W. McGraw, James H. McGraw, Jr., Donald C. McGraw, Curtis W. McGraw, 330 West 42nd St., N. Y. C. Curtis W. McGraw, 330 West 42nd St., N. Y. C. Donald C. McGraw, 330 West 42nd St., N. Y. C. Anne Hugus Britton, 330 West 42nd St., N. Y. C. Mildred W. McGraw, Madison, N. J. Grace W. Mehren, 73 No. Country Club Drive, Phoenix, Ariz. J. Malcolm Muir & Guaranty Trust Co. of New York, Trustees for Lida Kelly Muir, 140 Broadway, N. Y. C.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the names of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is. (This information is required from daily publications only.)

J. A. GERARDI, Secretary.
McGRAW-HILL PUBLISHING COMPANY, INC.

Sworn to and subscribed before me this 29th day of September, 1942.

[SEAL] CHESTER W. DIBBLE.

Notary Public, Queens County. Queens County Clerk's No. 4166. Certificate filed in N. Y. Co. Clerk's No. 889.

(My commission expires March 30, 1943)

Association Notes

KANSAS CITY—The Electric Association of Kansas City held its annual Supper-Dance on November 7 at the Hillcrest Country Club. Circle dances and "ice-breakers" helped to get everyone well acquainted.

At a recent luncheon meeting, an excellent and forceful message on the philosophy of war and peace was given by James F. Lincoln, president of the Lincoln Electric Co., Cleveland, and president of the Cleveland Chamber of Commerce. He made the point that, unless man uses his reasoning power to keep pace spiritually with the mechanical developments, our civilization can disappear as others have done.

A luncheon held on October 13 was held in the Municipal Auditorium with the War Chest and Community Fund Workers. During the week of that drive, organizations that met at noon shifted their meetings to the Auditorium and had lunch with the drive workers.

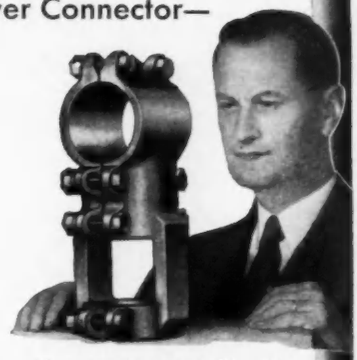
NEW ORLEANS—Acting Secretary W. E. Clement represented the Electrical New Orleans Association at the 1942 conference of the International Association of Electrical Leagues which was held at Cleveland, Ohio, September 17–19.

The first item on the program was a "Welcome to Conferees" by C. H. Christine, president, of the I.A.E.L. Subjects discussed at the meeting were the "Home," "Commercial," and "Industrial" markets; "Wiring for War-Time Service and Governmental Regulations"; and "Post-War Planning."

The "Business Session" closed with the election of J. A. Morrison of Philadelphia as president and W. A. Ritt of Minneapolis as vice president.

PHILADELPHIA — The Electrical Association of Philadelphia held its twenty-fifth anniversary dinner in the ballroom of the Benjamin Franklin Hotel on September 15 with more than 400 members attending. Seated at one table were seven of the original twenty founders of the Association—A. L. Hallstrom, Joseph P. Manypenny, Gilbert S. Smith, James A. Vaughn, Hervey S. Walker, Philip H. Ward, Jr., and Roswell C. Williams, Jr. President A. L. Halstrom presided and at the conclusion of the dinner expressed a warm greeting to the assemblage and made reference to the twenty-fifth anniversary of the Association and its founding group. Mr. George Whitman, vice president in charge of sales, Philadelphia Electric Co., presented to the members, the season's plans regarding the series of advertisements that were prepared during the summer months.

"When you need ANY Power Connector—

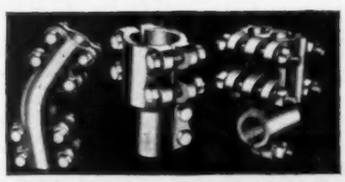


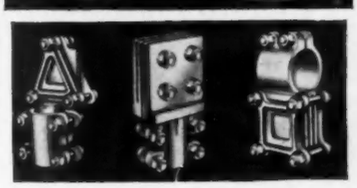
—see the **COMPLETE** line"

Probably the exact Power Connector you want is shown in the Penn-Union Catalog.

You will find Tee, Stud and End Connectors, Bus Supports, Terminals, Elbow and Cross Connectors, Couplers and Reducers—

—each in a wide range of sizes, up to the largest. Here are a few of the many types:





Also the most complete line of Cable Taps, Straight and Parallel Connectors, Lugs, Grounding Clamps — every good type.

Leading utilities, industrials, electrical manufacturers and contractors have found that *"Penn-Union" on a fitting is their best guarantee of Dependability.* Write for Catalog.

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ERIE, PA. *Sold by Leading Jobbers*

PENN-UNION
Conductor Fittings

TRICO PRODUCTS
for NATIONAL DEFENSE
Engineered to meet the "round-the-clock" production requirements of today. TRICO PRODUCTS are helping to beat war production schedules by eliminating needless fuse blowings, accidents, and equipment repair.
Help your customers to place MORE war products into the waiting hands of the armed forces SOONER by supplying TRICO — the line that will be as popular — and PROFITABLE — tomorrow as it is today.
Get complete details from your TRICO Representative, or write
TRICO FUSE MFG. CO., Milwaukee, Wis.
In Canada: IRVING SMITH LIMITED, Montreal

ILSCO
Electrical Connectors
New MULTIPLE CONNECTORS
MODEL LU4
for wires from 0 to 350,000 c.m.
MODEL LU6
for wires from 250,000 to 500,000 c.m.
SIMPLE in design with ample contact area for sustained overloads. Make a neat installation of maximum efficiency. No special tools required.
Pure copper of highest conductivity.
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ADVERTISERS' INDEX

A

Adam Electric Co., Frank..... 49
Amer. Automatic Elec. Sales Co.... 16
Appleton Electric Co..... 23
Arrow-Hart & Hegeman Elec. Co... 8

B

Benjamin Elec. Mfg. Co..... 24
Briegel Method Tool Co..... 69
Bright Light Reflector Co..... 58
Bull Dog Elec. Prod., Inc..... 25
Bussmann Mfg. Co.....Back Cover

C

Champion Lamp Works..... 50
Chicago Transformer Corp..... 59
Circulators & Devices Mfg. Co..... 68
Commercial Metal Prod. Co..... 70
Crescent Ins. Wire & Cable Co..... 61
Curtis Lighting, Inc..... 10
Cutler Hammer, Inc...Inside Front Cover

E

Edwards & Co..... 11

F

Federal Elec. Prod. Co..... 63
Fleur-O-Lier Mfrs.....14, 15
Fostoria Pressed Steel Corp..... 12
Fullman Mfg. Co..... 65

G

General Electric Co. (Bridgeport)... 36
General Electric Co. (Nela Park) .4, 5, 69
Goodrich Elec. Co..... 60

H

Hazard Ins. Wire Works Div..... 54

I

Illinois Electric Porcelain Co..... 64
Ilsco Copper Tube & Products, Inc.. 72

J

Jefferson Elec. Co..... 18

K

Klein & Sons, Math..... 62

M

Miller Company 3

N

North American Lamp Co..... 71

O

Okonite Company 54

P

Pass & Seymour, Inc..... 68
Penn Union Electric Corp..... 71
Plymouth Rubber Co..Inside Back Cover

Q

Quadrangle Mfg. Co..... 66

R

Republic Steel Corp.....20, 21
Revere Elec. Mfg. Co..... 29
RLM Standards Inst., Inc..... 26

S

Spero Electric Corp..... 17
Square D Company..... 6
Steel & Tubes Div.....20, 21
Sylvania Elec. Prod., Inc..... 40

T

Tork Clock Co..... 68
Trico Fuse Mfg. Co..... 72

U

U. S. Treasury Dept..... 48

W

Wakefield Brass Co., F. W..... 51
Ware Brothers 68
Westinghouse Elec. & Mfg. Co. (Lamp Div.) 30, 31
Wolverine Tube Division..... 67